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RICHARD P. ROTHWELL, C. E., M. E., } Editors.
ROSSITER W. RAYMOND, Ph. D., }
Gen. FRANCIS L. VINTON, M. E., Superintendent of Western Office.

NOTE.—Communications relative to the editorial management should be addressed to Mr. ROTHWELL, P. O. BOX 4404, New York. Articles written by Mr. RAYMOND will be signed thus *

Business communications for the Western Department should be addressed to the Western Office at Denver, Colo.

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SILVER IN THE SOUTH.

Mr. C. R. BOYD, appointed Commissioner to Paris by the Governor of Virginia, writes us from Wytheville, just before starting, an interesting note concerning ore of the Peach Blossom copper mine, which, he says, instead of being chalcopyrite or yellow copper pyrites, as was supposed, turns out to be polytelite (argentiferous tetrahedrite) of a niccoliferous variety and free from zinc. He bases this conclusion upon an analysis by Prof. DEAN, of Vincennes, Ind., according to which the mineral contains: Copper, 31; iron, 40·228; sulphur, 11; nickel, 2; arsenic, 10; silver, 1; and antimony, 4·77. The richness of this material in silver (over $400 to the ton, even at the present low value of silver) is surprising. A poorer average, taken from the mass of the vein, gave, says Mr. BOYD, 0·12 per cent of silver. He describes the vein as six feet wide, between well-defined walls of talco-micaceous schist and slate, nearly vertical in position, and traceable by outcrop for a considerable distance on either side of the present opening, which exposes it 150 feet below the surface. If these indications of value should be confirmed by further experience, they will furnish most encouraging proof of the mineral wealth of southwestern Virginia and northwestern North Carolina. But we confess that polytelite, so peculiar in appearance as to be mistaken for copper pyrites, is a novelty that seems suspicious. *

VERTICAL MINING BOUNDARIES AGAIN.

We publish this week another communication from Mr. F. C. MORSE, of Fairplay, Colo., on the subject of vertical boundary planes for mining claims. Mr. MORSE is evidently very much in earnest with this plan for improving the security of mining titles in the West. We are glad of it, and we should be glad if the number of those citizens of the mining districts who agree with him were far greater than it is. Notwithstanding his sanguine estimate, we must reiterate our belief that there is no such general feeling as he imagines in favor of this change in the system of mining titles. So far as we are aware, there has never been a petition to that effect transmitted to Congress; and if our correspondent wishes to test the sense of the community in which he resides, he has only to circulate such a petition, and see how many signatures it will receive. But when that is done, and done (let us suppose, for instance, in Leadville) with success, it will still be necessary to study the probable operation of such a change, and the feelings of the community toward it in other districts, States and Territories; and for this purpose a governmental commission would be useful, if not indispensable. Indeed, the defects of the present law are largely due to the way in which it was patched together, Act after Act, at the suggestion of local interests and without any thorough foregoing consideration of the whole field.

Mr. MORSE's objection, that a government commission would result in the framing of a complicated or obscure law, is not well founded. What such a commission would do is just what Mr. MORSE is trying to do—ventilate the subject and bring out the results of experience as hitherto developed under the present system. Our correspondent will speedily find, if he does not feel already, that the practical and equitable solution of this difficult administrative problem can not be approached even, still less attained, in any other way. If the West were unanimously crying for a change, the case might be different; but, with all the good-will in the world, we have listened, and we hear nobody but Mr. MORSE.

As to the origin of the system of "inclined locations," even in the West, Mr. MORSE's experience, dating back to 1860, is too recent to prove his statement. The system was in full operation on the Pacific coast before he began to help make miners' laws in Colorado. But it is not worth while to debate a point of so little historical importance. *

THE INDUSTRIES OF CHATTANOOGA.

Our recent articles on the Chattanooga excursions would be incomplete without some further account of the industries which center in the city itself. This we shall now proceed to give, regretting that our space will not permit us to enlarge upon details. It is the greater pity, since, as we understand, our "excursion articles" have made the Tennessee steamboat captains awfully proud, and caused them to despise the humble blast-furnace and rolling-mill proprietors, who received much less attention from us.

THE ROANE IRON COMPANY

represents the largest industry in Chattanooga. It was originally a company located at Rockwood, Tenn., and developing the coal and iron property purchased in 1865 by Capt. H. S. CHAMBERLAIN and Gen. J. T. WILDER. The present company was organized in 1870 by the purchase of the Southwestern Iron Co.'s rolling mill at Chattanooga, and the consolidation of the two companies under the name of the Roane. The capital is $1,000,000; the officers are W. P. RATHBURN, President; H. S. CHAMBERLAIN, Vice-President and Manager; H. CLAY EVANS, Secretary; S. B. STRONG, Assistant Manager; C. CONSTABLE, Furnace Manager. The product includes pig-iron and iron and steel rails. The furnaces at Rockwood have a capacity of sixty tons per day; No. 1 is 52 feet high by 14 feet bosh; No. 2, 65 by 16 feet. These furnaces are supplied with blast by two engines, one of which, built by GREENLEAF & CO., Indianapolis, has 6 feet diameter and 4 feet stroke, and the other, built by THOMAS WEBSTER, of Chattanooga, has 7 feet diameter and 4 feet stroke. The number of workmen in the mines and furnaces at Rockwood is about 250. In a former article we have given some account of the place.

From Rockwood the pig-iron is brought by steamer down the Tennessee to Chattanooga, where the remaining works of the company are located. The puddle mill, blooming mill for steel, and rail mill are under one roof, the building being 80 feet wide and 600 feet long, covered with iron and slate. The steel melting house is 80×130 feet, built of brick in the most substantial manner, and covered with iron. The gas generators—12 in number—are under a separate roof. The company has its own foundry, machine shop, blacksmith, carpenter, and pattern shops, suitable for doing all its own repairs, and much construction from time to time. The capacity of the mills is 30,000 tons of iron and 15,000 tons steel rails per annum. When running full capacity, about 600 workmen are employed. These mills have furnished rails during the past year to the Texas and Pacific R. R., Little Rock and Fort Smith R. R., Memphis and Little Rock R. R., Memphis and Charleston R. R., Chicago, St. Louis, and New Orleans R. R., Mobile and Ohio R. R., Alabama Great Southern R. R., Mobile and Montgomery R. R., Western R. R. of Alabama, Alabama Central R. R., Montgomery and Eufaula R. R., Southwestern R. R. of Georgia, Georgia Central R. R., Selma, Rome, and Dalton R. R., Duck Valley R. R., Natchez, Columbus, and Jackson R. R., East Tennessee, Virginia, and Georgia R. R., Nashville and Chattanooga R. R., and others in the country. The rails manufactured are guaranteed equal in every respect to any in the market. For the past two years the company has been making all rails by the reheating process.

The steel melting plant comprises two 10-ton Siemens furnaces, one of which has made a few trial heats. It is expected that the company will commence the manufacture of open-hearth steel rails during the present month. The only other place where rails from Martin steel are manufactured in the United States is St. Albans, Vermont. A Fritz blooming mill, a Siemens reheating furnace, hydraulic cranes, etc., are provided for the manipulation of the steel. The rail-mill engine is a 42″×42″ upright Corliss; the blooming-train engine, 30″×36″ upright Corliss; the puddle-mill engine, 30″×36″ horizontal (Webster).

The Rockwood iron, being manufactured from the red fossil or dyestone ore, is too phosphoric for the steel manufacture; and for this purpose

Bessemer iron, produced from Georgia specular and brown hematites, is purchased from the Chattanooga Iron Co.

Concerning the other leading industrial establishments of Chattanooga, we give the following statements, taken from the Chattanooga Directory, and vouched for as trustworthy by leading local authority:

VULCAN IRON AND NAIL WORKS.

"The owners of these works are Messrs. J. C. Haselton and W. H. Harrison. Mr. F. I. Stone is general manager. The works were put into operation in July, 1877. Since then the demand for their merchant bar iron, nails, spikes, light T rails, etc., has been such that it has necessitated the running of the works upon double time. The total capacity is 36 tons of finished iron and nails per 24 hours. Twenty-six nail machines are kept constantly running, the product of which amounts to from 200 to 250 kegs per day. There are eight single and one double furnace, five heating-furnaces, and six engines, from 6 to 125 horse-power. There are employed in the various branches of the works about 500 men. The pig-iron used is purchased in Chattanooga.

THE CHATTANOOGA IRON COMPANY.

"The President of this company is Mr. J. C. Warner, of Nashville, and Mr. Edward Doud is Superintendent, Secretary, and Treasurer. The furnace was put into blast in 1874 for the manufacture of pig-iron used in the making of the Bessemer steel. The pig-iron is made from brown hematite, fossiliferous, and specular ore. The capacity per 24 hours is 25 tons. The furnace is 12 × 60 feet. Twenty-six hands are employed. This company has the reputation of manufacturing iron cheaper than any other furnace in the United States. It has continued in full blast, notwithstanding the recent general depression in the iron business.

WASON CAR FOUNDRY COMPANY.

"The shops of this company are situated in the Fifth Ward, corner Fort and railroad crossing. The works are very extensive, the shops—five large brick buildings—are well designed for their purpose, and fitted up with the most improved machinery. Their favorable location to secure all requisite materials, and their thorough equipment, afford this company every facility for the manufacture of railroad cars, and all kinds of car and locomotive wheels. The works have a capacity of four freight cars and fifty wheels per day. A large number of men are employed in the several shops.

"The works are controlled by men of experience, who founded and successfully conducted similar enterprises in the East and West.

"This company was organized in 1873, with a capital stock of $200,000. The Board of Directors are: Charles Wason and S. M. Carpenter, of Cleveland, Ohio; H. S. Chamberlain, H. C. Evans, and W. H. Parker, of Chattanooga, Tenn. The officers are: Charles Wason, President; W. H. Parker, Vice-President and Superintendent; F. F. Morrill, Secretary and Treasurer.

CHATTANOOGA PIPE AND MACHINE WORKS.

"D. Giles & Co., proprietors. A large and extensive brick building is used by this firm. Special attention is given to the pipe business. Their work is sent throughout the Southern States, and compete in prices and work with the largest foundries in the country. Their works have been giving general satisfaction, and their trade is rapidly increasing.

"The pipe foundry, at present, has a capacity of 100 3-inch pipes per day, and a proportionate number of pipes of larger diameter up to 48 inches. When the demand calls for a larger supply, a similar pit, and oven, and steam crane will be erected at the other end of the foundry, when the production can be doubled, and other buildings erected as fast as the increase of the trade demands.

"Mr. David Giles and Mr. Caleb Isbester, both first-class mechanics and business men, are the chief proprietors, assisted by their bookkeeper and financial agent, Mr. Samuel Harrison.

TENNESSEE IRON AND STEEL COMPANY.

"This company was organized July 8th, 1876. The capital stock is $35,000. The products are bar-iron, light T rails, and fish-plates. The capacity at present, is 3000 tons per annum.

"Officers: L. Scofield, President and Manager; J. A. Austin, Agent and Treasurer; L. Scofield, Jr., Secretary.

"Board of Directors: L. Scofield, J. W. McCrath, Major Thomas O'Connor, L. Scofield, Jr., J. A. Austin.

ETNA FOUNDRY AND MACHINE WORKS.

"These works were established in 1875 by Mr. G. W. Wheland. Employment is given to about twenty hands. Casting is done for machinery, water-wheels, etc. At these works the celebrated Todd's patent turbine wheels are manufactured, and shipped direct to purchasers.

PROVIDENCE STEEL WORKS.

"The capacity of these works is about 1500 pounds per day of the best hammered cast-steel for drills and tools. Operations were commenced in January, 1878. There are one puddling furnace and three crucible furnaces.

SOUTHERN PUMP AND PIPE COMPANY.

"The Southern Pump and Pipe Company established its works in Chattanooga, in January, 1874. The proprietors are Joseph Shipp, formerly of Atlanta, Ga., and H. F. Temple, formerly of Chicago, Ill. These parties had been engaged in their line of business for a number of years previous to locating here, and chose this location partly on account of the superior facilities here enjoyed for procuring the necessary quality and quantity of material, but chiefly because its central position enables them to reach all sections of the United States where their goods are in demand.

"The machinery employed in their works is of the latest improved patterns and contains every appliance for rapid and perfect work. The capacity of the works at present is fifty finished pumps per day, but the company expect this season to add largely to their facilities to meet the increasing demands of the trade. Their goods are now being sold to all the Southern States and nearly all the Western States and Territories. They keep a large force of men constantly at work and use in their business about one million feet of lumber. They manufacture and deal in plain and porcelain-lined farm pumps, water-pipe, patent wood-pipe for water and gas mains, tubing and pump material, etc. Factory and office at Wason Car Works.

OAK LEATHER TANNERY.

"The owners are Messrs. J. B. Hoyt, of Connecticut; D. D. Fayerweather, and H. S. Ladue, of New York. This is one of the most extensive works of the kind in the South. Work was commenced on the buildings in April, 1876, and the first hides were put in the vats in the fall of the same year. But since then they have been constantly increasing the dimensions of the buildings, which now contain 320 vats, and a large number are soon to be added to these. They tan from 35,000 to 45,000 hides per year, consuming during that time from 8000 to 10,000 cords of bark, which is procured in Alabama, Georgia, and Tennessee. The principal object of this tannery is the manufacture of leather for belting, but only about 50 per cent of the finished leather is suitable for that purpose; the other portion being used for sole leather and in the manufacture of women's shoes. They use altogether the green salted hides which are exclusively purchased in New York, whence all the hides are shipped from this city to be finished ready for market. From the leather made here and at their seven other tanneries—three in Pennsylvania, two in Maryland, and one in West Virginia—is selected leather for the manufacture of the celebrated Hoyt Belting, which is known and used throughout the United States and Europe. This industry alone ships from Chattanooga a finished product valued at $500,000.

CHATTANOOGA SAW WORKS.

"Situated on Railroad avenue between Seventh and Eighth streets. These works were established in July, 1876, by B. W. Lewis, of Dayton, Ohio. They have been doing a fair share of business since that time, according to their capacity, which was not then as large as now. They are now about to enlarge—in fact, have done so—and henceforth will be able to fill all orders sent in. They are manufacturing saws from the rough steel which they get from Pittsburg, Pa. They think, when fully under headway, they will have a capacity for making from $50,000 to $75,000 worth of saws per year, and hope to supply the whole Southern trade. The machinery for this work is all on the ground, and a goodly portion of it up. They employ, when running in full capacity, from fifteen to twenty hands. The firm, C. C. Lewis & Co., consists of Messrs. C. C. and G. B. Lewis.

THE NOVELTY MACHINE WORKS.

"These works are situated at the corner of Seventh and Cherry streets. Mr. Harry Wilcox, a thorough and practical machinist, is proprietor. The latest improved machinery is used. A specialty is made of the manufacture of machine forging and wrought-iron fencing. The best of mechanics are employed.

ENTERPRISE MACHINE WORKS.

"Truxal & Dunmeyer, proprietors. Manufacture engines, pumps, working models, tools, and experimental machinery. The proprietors are practical workmen. Several skilled machinists are employed. Do all kinds of repairing of machinery. Their trade extends throughout the adjoining States.

CHATTANOOGA BOILER FACTORY.

"J. M. Wilson, proprietor. Mr. Wilson is a thorough mechanic, and oversees all the work. The factory was started June, 1877, and has been making good progress, the trade extending throughout the South. All kinds of sheet-iron work done. Factory on N., C., and St. L. R. R., opposite D. Giles & Co.

CHICKASAW IRON AND BRASS FOUNDRY.

"J. T. Cahill, proprietor. Castings of all kinds made to order. Specialty of the column castings of the most ancient and modern styles. About ten men are employed.

THE CHATTANOOGA ICE FACTORY.

"The owner is Mr. J. M. Beath. Ice-making was commenced in 1875, and has been in operation during the summer months since, but will hereafter be run winter and summer. The capacity is three to four tons every 24 hours. The ice is sold to dealers at $20 per ton.

LOOMIS, HART & STEWARD, SAW AND PLANING MILL.

"The mill was started in 1865 under the firm name of Loomis & Bennett, with a capacity of 50,000 feet of lumber per day. The great inundation of 1867 carried the mill away; it was immediately rebuilt. In 1870 the old mill was sold and a new one rebuilt, with a capacity of 150,000 feet of lumber per day. The freshet of 1875 carried away this mill; but it was rebuilt immediately, with increased capacity of 250,000 feet of lumber per day. In 1876 the firm was changed to Loomis, Hart & Steward, and in 1877 they built a planing mill and bedstead factory, with a capacity of 100 bedsteads per day. For some time the mills have been running at their full capacity, giving employment to some 70 men. About 4,000,000 feet of lumber are used in the manufacture of bedsteads. Their bedsteads are shipped throughout the Southern States. The mills are situated on the river, corner of Cedar and Front streets. Wareroom Market between Second and Third streets.

RUOFF & CO.

"The planing mills owned by this company are thoroughly equipped with the best machinery for the manufacture of doors, sashes, blinds, etc. They handle about 2,000,000 feet of lumber per annum, and turn out yearly a manufactured product of between $40,000 and $50,000."

NEW PUBLICATIONS.

Reports of the Inspectors of Mines *of the Anthracite Coal Regions of Pennsylvania, for the year* 1877. Harrisburg, 1878.

The days of the merry M'Andrew are over; and the annual volume of Pennsylvania Inspector's reports is no longer a contribution to the comic literature of the period. There will be less laughter in the world, perhaps; but we are willing, on the whole, to forego laughing in this case, for the sake of other considerations, equally important. Indeed, the State of Pennsylvania did more than could fairly be asked of her, in making herself ridiculous, so many years in succession, just for the amusement of mankind.

The present volume of Reports is, in typographical appearance as in contents, a great improvement on its predecessors, and worthy of the industry it represents and the law under which it is issued. Last year's volume was good; but this is better. The inspectors have confined themselves in the main to the business which they thoroughly understand, and which they are appointed to discharge, namely, the description of the condition of the collieries in their districts, with special reference to the safety of the workmen. Valuable statistics of production, etc., are also given. But what these officers, and they alone, could furnish, they have presented with admirable fullness and clearness, namely, the practical discussion of the accidents occurring during the year, and of their causes. The result is a really important contribution to the literature of mine-engineering, conveyed in a form which will make it useful to workingmen as well as to engineers. It is true that a slip in style, now and then, or a mistake in scientific statement, betrays the inexperienced hand; but what these experienced miners mean to say is almost invariably shrewd and wise; and they manage to make their meaning clear. To take the first illustration that falls under our eye: Mr. Parton, of the First (Pottsville) District, in a few judicious remarks on ventilation, points out the superiority of the fan to the furnace, and then combats the impression that mere increase of power applied to a given fan will indefinitely increase the amount of air drawn through the mine. He urges that all that the fan can possibly do is to create a vacuum over the upcast, and that the air is then forced through the mine by the natural pressure which exists on the other side. "It is evident,"

he adds, "that after a perfect vacuum has been created, any additional power applied to the fan is useless, and will not add one iota to the quantity of air passing through the mine;" and therefore he insists forcibly on the enlargement of air-passages and the removal of rugged surfaces or unnecessary turns in them, as the only way of increasing ventilation in such cases. This is excellent and timely advice; and the fact that no fan creates a perfect vacuum under any circumstances, does not invalidate Mr. PARTON'S meaning, though it contradicts, strictly considered, his explanation.

We notice in the reports of Mr. PARTON, Mr. WILLIAMS (Wilkes-Barre District), and Mr. W. S. JONES (Scranton District), in particular, a refreshing plainness of speech toward the working miners. It is a notorious fact that the absence of discipline and of personal prudence among the anthracite miners is the occasion, if not the cause, of a large proportion of the accidents in the mines. In times past, they have seemed almost to prefer that their labor should be surrounded with superfluous peril. At least, they used the fact in support of their demands for higher wages than were paid to the same class elsewhere. And the inspectors had far too little to say about the faults of the operatives. But there is a wiser sentiment now. Hard times have brought low wages. There is no money to be made out of unnecessary danger; and the plain speech of the inspectors will be, we trust, received with gratitude even by those at whom it is aimed. Mr. WILLIAMS gives a graphic account of the difficulties of his official duty, illustrated with an engraved *fac-simile* of a ludicrous sample letter of complaint from miners, and concludes rather mournfully, "In fact, an inspector that will do his duty in the premises is continually a target for both sides." But the kind of target-shooting to which he refers is not that which until recently prevailed in Schuylkill County and elsewhere. It may be imagination; but we can not help feeling that the overthrow of the personal and political tyranny of the Molly Maguires has inspired a very decided freedom in the utterances of the mine inspectors, all round.

This volume is enriched with fifteen handsome and instructive plates. The frontispiece is STRAUCH & COCHRAN'S excellent little map of the anthracite coal fields. Most of the other plates explain the circumstances of accidents, thus completing the discussions given in the text. One, in the report of T. D. JONES (Hazleton District), gives a number of valuable sections obtained by boring and mining; and two others, in the same report, illustrate the interesting case of the Harleigh and Ebervale collieries, in which it was necessary to drain the water from the former into the latter by means of holes bored through an intervening pillar of coal. This was a case, by the way, in which the silence of the law permitted a considerable damage to be done by one operator, mining so near his boundary-line as to leave a pillar inadequate to support the 320 feet of water which subsequently accumulated in his abandoned works. Mr. JONES'S remarks on this point are worthy of consideration.

We condense from the reports the following Tables of Accidents:

DISTRICT.	A. Product in tons.		B. Persons emply'd.		C. Lives lost.		D. Persons injured.	
	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.
I	.....	1,580,780	.....	5,847	28	29	83	111
II	2,891,117	3,805,467	12,218	10,537	27	33	48	55
III	3,208,306	3,471,562	10,652	10,857	37	28	61	66
IV	4,615,386	4,080,327	14,317	14,073	55	38	87	121
V	4,862,512	4,808,208	17,152	16,312	44	40	120	174
VI	3,503,118	4,070,014	9,648	9,216	37	26	74	60

RATIOS.

DISTRICT.	A to B.		A to C.		B to C.		Inspector.
	1876.	1877.	1876.	1877.	1876.	1877.	
I	....	270	.....	54,510	....	202	Sampson Parton.
II	237	361	107,078	115,317	452	319	Samuel Gay.
III	282	320	86,711	123,984	288	388	William Hemingray.
IV	323	290	83,916	107,377	260	270	T. M. Williams.
V	283	295	110,511	120,205	390	408	William S. Jones.
VI	363	442	94,679	156,539	354	340	T. D. Jones.

I. First Schuylkill (Pottsville) District; II. Second Schuylkill (Shenandoah) District; III. Third Schuylkill (Shamokin) District; IV. Middle (Wilkes-Barre) District of Luzerne and Carbon Counties; V. Eastern (Scranton) District of Luzerne and Carbon Counties; VI. Southern (Hazleton) District of Luzerne and Carbon Counties.

A tabular statement, compiled by Mr. T. D. JONES from the Inspector's reports since 1871, shows the following frightful summary of casualties in the anthracite mines:

YEAR.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	Total.
Killed	271	223	266	262	238	228	194	1682
Injured	664	611	688	558	587	473	590	4171
Widows	136	121	142	134	102	132	201	968
Orphans	485	382	486	396	341	399	314	2804

This is a tragical theme; but Mr. JONES, by a careless computation almost worthy of M'ANDREW, has let a ray of humor into it. As the table stands, we are informed by it that the 194 men killed in 1877 left 201 widows. We have traced this surprising statement to its origin in the report from the Eastern District of Luzerne, where it appears that 40 men left 129 widows. The first figure is an accidental interpolation; and the compiler should have detected the absurdity. The true number of widows for 1877 is 101, and the grand total is 868. About half the men killed were married, and had, on an average, from 3 to 4 children each. Such statistics speak louder than words of the necessity of more thorough precautions on the part of operators, or greater prudence on the part of the miners, or both. We believe that the mine bosses and miners are now chiefly to blame. There appears to be little disposition on the part of operators to neglect useful precautions. Of the 194 fatal accidents of last year, 114 were due to falls of roof or coal, which should have been prevented or foreseen by the bosses and men.

The above table shows incidentally how little, after all, the inspection of the mines has accomplished in the prevention of accidents. But if we remember that the product of anthracite has increased since 1871 from about fifteen to about twenty million tons per annum, and that the mines, with increasing depth, have become more dangerous in many ways, we may fairly conclude that the provisions of the law have not been altogether ineffectual. Especially within the last two or three years, its enforcement has been reasonably efficient, though the inspectors still find themselves thwarted by the indifference of grand juries in their efforts to bring offending parties to a sense of their responsibility. It is not always possible to get men indicted whose recklessness has caused the loss of life. Yet it ought to be possible to indict and punish all parties, whether operators, mine bosses, or common miners and laborers, who are guilty of such recklessness, even when no disaster is the result. And not until that state of affairs is realized, and obedience to the law on the part of owners and operators is reinforced by discipline among employés, will the death-roll be reduced to the proportions fairly due to the risks inseparable from mining. *

THE SPEAKING TELEPHONE, TALKING PHONOGRAPH, AND OTHER NOVELTIES. By GEORGE B. PRESCOTT. *Fully Illustrated.* New York: D. Appleton & Co. 1878.

This book ought to find a ready sale, since it appears at a time when every body is interested in the subjects of which it treats. Moreover, Mr. PRESCOTT is fully competent, as the pages of the work before us show, to give to these subjects a scientifically accurate, yet popularly comprehensible explanation. Finally, the typography and illustrations are extremely handsome and attractive. As an offset to all these advantages, we have to complain that Mr. PRESCOTT has used his scissors too much, and his pen too little, quoting *in extenso* lectures by BELL, GRAY, and others, and articles from magazines and newspapers, and, what is worse, printing quotations, comments, and original matter in one uniform style, so that it is a work of much difficulty and annoyance to determine, on opening to any page, whose thoughts and words are there set down. Quotation-marks are usually absent. The only sign of a long quotation—perhaps amounting to an entire chapter—is a foot-note at the beginning. Where the end is, the reader must infer from internal evidence. The effect of this typographical deceit is extremely disagreeable. Moreover, it leads to a considerable amount of unnecessary repetition, even of illustrations. (See pp. 23, 43; 78, 88, 276; 72, 93, 101, etc.) But, in spite of these defects, the book is full of interesting, valuable, and timely information not yet collected elsewhere. It is better to have it in this ill-arranged and undigested form than not to have it.

It is apparent that while Mr. PRESCOTT endeavors to give full credit to Mr. BELL for his invention, he thinks that Mr. BELL claims more than his due; and there are some signs of that asperity of criticism which is apt to arise when questions of scientific priority are connected with questions of patent-rights and profits. Not that Mr. PRESCOTT grows bitter in his criticisms. On the contrary, he maintains, on the whole, a judicial tone; and we are not aware that he has any personal interest in the issue. But there are "the makings" of a very pretty fight in his book, though he published it just too soon to include in it the EDISON-HUGHES contest over the microphone.

The chapters on multiplex telegraphy, which follow those on the telephone and phonograph, will be welcome to those who understand the subject sufficiently to follow their explanations. The complexity of the apparatus employed is, indeed, rather apparent than real; but it is *very* apparent, as a reference to the diagrams will convince the reader. Indeed, we can recommend to any non-electrical person, troubled with pride of intellect, no better cure than the study of Fig. 160 (p. 352) in this book, in connection with the series of permutations and combinations described on the following pages.

The final chapter gives a brief (too brief) discussion of the electric light.

We ought to say in conclusion that the defects in arrangement of which we have complained are at least partially remedied by a good analytical index, by the aid of which the reader can track each topic through what would otherwise be a labyrinth without a clue. *

Mr. EDWARD R. ANDREWS, proprietor of the Hayford Patent Creosote Wood-Preserving Works, located at Elizabeth, N. J., sends us a photograph of a piece of pine slab partially creosoted, and exposed during one season (1877), in the Gulf of Mexico, to the attacks of the *teredo navalis*.

The picture shows plainly that the creosoted portion of the block was left entirely untouched, while the rest was completely riddled by the worm. It is an excellent advertisement for Mr. Andrews, serving to call the attention of those interested in wood-construction to the great efficiency of creosote oil as a preservative. He is ready to give further particulars on application at his office, No. 10 Warren street.

BOOKS RECEIVED.

Some of the books of the following list will receive extended review hereafter:

Railway Service: Trains and Stations. Describing the Manner of Operating Trains, and the Duties of Train and Station Officials. By Marshall M. Kirkman. 8vo, pp. 271. Published by *The Railroad Gazette*, New York. 1878.

Annual Report of the New York Meteorological Observatory for 1877. By Daniel Draper, Director, Central Park, New York. 8vo, pp. 32.

Metric Primer. A Text Book for Beginners. 48 pages. Published by the American Metric Bureau, Boston, Mass. 1878.

Mines Classed under the Coal Mines Regulation Act, Summaries of the Statistics for the Twelve Districts for 1877; *Mines Classed under the Metalliferous Mines Regulation Act*, Summaries of the Persons Employed and Mining Produce for the year 1875; Summaries of the Persons Employed, Mining Produce, Accidents and Lives Lost for the year 1877. By Dr. C. Le Neve Foster, H. M. Inspector of Mines. Truro, England. 1878.

The Valley of the Schuylkill and its Attractions. Short Summer Tours through the Agricultural Country, Mountains, and Coal-fields, upon the Line of the Philadelphia and Reading R.R. Illustrations and descriptive matter by Frank H. Taylor. Pamphlet, pp. 55. Published by James W. Nagle, Philadelphia, Pa.

Chimney Construction. A paper read before the Civil and Mechanical Engineers' Society, at No. 7 Westminster Chambers, on the 24th January, 1878. By R. M. Bancroft. Pages 26.

Report of the New Jersey State Commission appointed to Devise a Plan for the Encouragement of Manufacturers of Ornamental and Textile Fabrics. 1878. Pamphlet, pp. 90. Trenton, N. J.: Naar, Day & Naar, Printers.

Proceedings of the California Academy of Sciences. Volume VI. 1875. 8vo, pp. 222. Price, $2. Volume VII., Part I. 1876. 8vo, pp. 174. Price, $1.75. San Francisco, Cal.

Musterconstructionen für den Eisenbahn-Betrieb. (*Construction Patterns for Railroad Management.*) By Edmund Heusinger von Waldegg. Folio. First Half of Third Part of Vol. I., containing numerous plates with description. Price, 3 marks. Published by Th. Mierzinsky, Hanover, Germany. 1878.

Musterconstructionen für den Eisenbahn-Bau. (*Railroad Construction Patterns.*) By Edmund Heusinger von Waldegg. First Half of Third Part, Vol. I. Folio, containing numerous plates, with description. Price, 2½ marks. Published by Th. Mierzinsky, Hanover, Germany. 1878. Each volume of both of these last publications will contain 5 parts; each part will contain about 8 to 10 pages reading matter and 10 plates of drawings. Subscription price of each part, 6 marks.

CORRESPONDENCE.

MINING LAWS AND MINING TITLES.

Editor Engineering and Mining Journal:

Sir: In your article entitled "Vertical Planes to Bound Mining Claims," in your issue of July 6th, 1878, you quote from the Report of the Commissioner of Mining Statistics for 1869, as follows: "To define the boundaries of mining ground by vertical planes does indeed lessen the danger of litigation, but it also lessens the value of the claim." I can not think so; the value is *not* lessened by vertical boundaries, but, on the contrary, is largely increased thereby and maintains its increased value until, mayhap, some time in the future, the lode may be found to pass beyond such boundaries. But this possibility will be guarded against, to a great extent, by the locators of newly-discovered mining lands, who will locate their claims upon the ground into which the mineral dips and runs.

The size of lode-claims being established at a uniform and reasonable quantity by Congress, with vertical lines for boundaries, the locator who has exercised due diligence and care in selecting his ground will be fully satisfied with the law and with the property which he has then and there secured under it; and he will be anxious to take all the chances of loss in exchange for the positive gain which inevitably results from stability of title under vertical line law. Moreover, he will not complain if the ore-bodies continue beyond his lines and into the land of his neighbor; the value will not be lost. No one can own all the land that joins him.

It is not because lodes "*vary* in dip to an extraordinary degree" that inclined locations are desirable, but this is the very reason why boundary lines should be vertical, because *that* variableness is also indefiniteness—great variation in the general dip being often caused by displacements in the rocks, uplifts, faults, offsets, etc., accompanied by the presence of spurs, offshoots, feeders, and other lodes, until the identification of any one of the lodes or veins becomes an utter impossibility; hence the different claimants thereof would have (as each of them would think) ample cause for litigation, and the whole would thereby become valueless.

The change from inclined locations to vertical boundaries can be easily and practically made, and will be entirely successful whenever earnestly and rightly attempted; but the matter should not be delegated to the miners for a decision under any circumstances, no matter whether they would vote it up or down; neither should the width or size of claims be subject to legislation by miners.

The mining laws should be uniformly applicable to all the public lands and should be enacted by Congress, not by miners or by State or Territorial legislatures. Is there any better reason why the prospectors upon mining lands should be allowed to make their own laws than the settlers upon agricultural lands to make theirs?

Referring to the granting and maintaining of claims containing "ten acres and upward," you say, "But how can such a change be practically made? It has been locally attempted and has always failed," giving the cause of failure to be that in every new district there are more claimants than the area of land will satisfy. You, of course, refer to localities in which miners' laws had established the size of claims, which size was afterward reduced by other miners who came in and compelled the first locators to divide their ground and surrender a portion to the new law-makers. By this communistic principle the land would be sub-subdivided upon the arrival of every fresh squad of law-making prospectors whose numbers could overbalance those previously in possession. I know that such transactions have actually occurred.

But it can not be seriously contended that laws made in this way by a parcel of excited miners and prospectors, form a sufficiently stable foundation upon which to base the title to mining real-estate which often proves to be of immense value.

It is well, for the present at least, that the right of possession and the right to purchase from government be based on the right of discovery.

This condition will not be affected one way or the other by the size of claims nor by the manner of location; that is, whether inclined or bounded by vertical lines.

You say, "When men are too numerous, properties will be too small." Not if Congress makes the laws, because then they could not be changed and rechanged, daily or weekly, by the impatient roving multitude. There need be no fear that "the zeal of the prospector" will nullify any Congressional law; nothing of the kind has ever been attempted. In fact, the prospectors and miners are now looking to Congress for a law which will be plain and effective, and will give to their discoveries a stability and value not possible to be obtained under the present laws.

You remark, "A public opinion in the West, favoring the introduction of the simple system of mineral land titles, which obtains elsewhere, seems to us an indispensable prerequisite to any change in the law." A public opinion of this kind is already in the ascendency in many localities. It is conceded by those best acquainted, that two thirds of the miners and prospectors in the new mining camp of Leadville, Colo., would to-day vote for vertical lines for boundaries, if they had any voice in the matter.

The same fact is true in regard to many other districts in the West, and particularly in those districts which have a large extent of stratified rock formations upon the surface, because in such formations the ores generally come from disconnected pockets, deposits, and bunches, too irregular in form and shape to be called lodes, or to be followed with any degree of certainty.

I participated in the making of miners' laws in Colorado in 1860, 1861, 1862, etc., and our laws then made granted claims along the lode and on the incline, for the precise reason as stated in my letter of June 11th, 1878, and *not* because Spain or Prussia had found the inclined system to be a failure; and in that letter I referred to the origin of the present system *in the West*, not to any foreign country.

The location and description of mining claims by rectangular subdivisions would not necessarily result in "square locations," having sides of equal length. A piece of land 1320 ft. by 330 ft. contains 10 acres; 660 ft. by 660 ft. contains 10 acres; 1320 ft. by 660 ft. contains 20 acres. The present law of Congress allows a lode claim to be 1500 ft. by 600 ft. (the width being subject to local law), containing 20·66 acres, and the width of 600 ft. has been adopted throughout a large portion of the West. Therefore, claims containing "ten acres and upward" would not, in that portion, involve an increase in size until they should pass above 20·66 acres.

Information from any and every source whatever is desirable; but those who are most deeply and directly interested (the dwellers in mining regions) in having the mining laws written in a few plain, practical sentences will fail to see the benefit to be derived from a "governmental commission of inquiry" wherein the chairman will probably become *the commission*, and will most likely draft an incomprehensible bill to be accepted and enacted by Congress, leaving unfortunate future litigants to determine their lawsuits through the medium of expert evidence procured (probably from said chairman) at vast expense, who alone may be capable of explaining and elucidating the tortuous terms of the law unto a court which may be wholly uninformed as to the meaning and effect of such terms, and also as to the nature and characteristics of mines. Let us have vertical lines for boundaries.

Fairplay, Colo., July 20, 1878. Fred. C. Morse, M.E.

NORTH SHORE LAKE SUPERIOR MINING.

Special Correspondence of the Engineering and Mining Journal.

Interest still centers in the results obtained and looked for at the Duncan mine, which so far have been cheering, if not satisfactory. The progress of sinking the shaft has been slow. To remove this drawback to keeping up the interest, steam-drills are to be introduced. A depth of about 470 feet has been reached; the vein is still broken up into stringers, some of which carry rich ore and native silver, in small quantities, looking well as assays, but of no practical value as yet.

The only part of the vein that remains uniform appears to be the cab, or north-wall parting, on which are three feet of brecciated vein, next a horse of felsite, and to the south of this more veins and stringers. It is expected that below this felsite "horse" the stringers will become more concentrated, and carry spar and silver ore in paying quantity.

Even though Duncan fails to find pay ore, it is highly probable that somewhere on the vein, at this depth, there will be a rich bonanza.

International, the adjoining property on the west, has the same vein as the Duncan, well defined, and promising fully as well in depth. The vein is also found still farther west; but at all points opened it is in the jasper-bearing green slate, found to be the barren belt in Duncan.

It has been the policy of the Duncan "Ring" to talk slightingly of this, although large owners in it. But the fact is, that $100,000, equal to $2 per share assessment, paid in and properly expended, would put this property in even better shape for future work than Duncan is to-day; the amount being ample to sink to the silver belt and fully equip the surface plant. This fact should make the market value of the stock nearer Duncan; but brokers must have their wily ways, and low-priced stocks are easily handled when the right time comes.

Dawson also seems to hang on the skirts of the ups and downs of Duncan; but its location is so far away, and the connection with this vein so doubtful, that even on Duncan's final success it would be valueless without farther exploration. It is merely one of the thousand and one barren out-crops of vein matrix that are found all through the district, many of which will no doubt carry ore in depth, but the fact must first be proved.

There is a report that the deep shaft at Silver Islet is being pumped

out preparatory to sinking it 400 feet deeper, which ought to have been done years ago. The work of putting in the false roof has been stopped for the present. The success at Duncan has given the manager fresh courage to believe the opinion of Capt. Frue that in depth Silver Islet will redeem her old reputation, and with the next bonanza give a larger percentage of dividends to the amount of expenditures.

The re-opening of the old Beck mine has become a fact, and will undoubtedly be followed by good results. Indications are favorable for a large amount of stamp work and bunches of silver glance.

Arrangements are now being made to thoroughly develop this property, and, if needed, put up crushing machinery, which has been on the ground for the last few years.

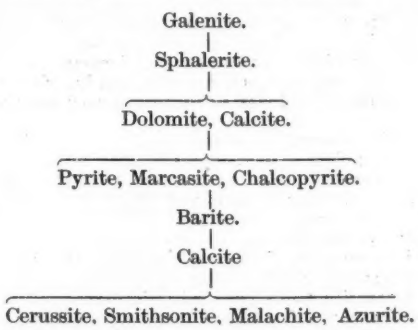
In my next I hope to give the final answer to the question, "Will the mines on the North Shore pay?" EZUEST.

THE LEAD REGION OF WISCONSIN.*

(*Continued from page* 61.)

MINERALOGY.

There does not appear to have been any absolute and unvarying order in which the minerals of the lead region were deposited in the mines. The following conclusions are derived from the inspection of the ore as it occurs in place in the numerous mines visited, and from the examination of a great number of specimens; and it is assumed that when crystals of one mineral are coated or covered with another, the overlying one is the more recent. The minerals appear to have been deposited in the following general order:



The order above given, however, is subject to very numerous and important exceptions, and is more particularly applicable to crystallized specimens than to heavy ore deposits. Large bodies of ore frequently consist of galenite, sphalerite, and pyrite, so mingled together that no order of deposition can be ascertained.

In general, it appears that the sulphurets of the metals were deposited first, and that the carbonates have been generally, if not invariably, derived from them. Carbonate of lead (cerussite), when found crystallized, always occurs in connection with galenite; and carbonate of zinc (Smithsonite) is so frequently found graduating into the sulphuret (sphalerite) as to leave but little doubt of its origin from that mineral.

It seems not improbable that the formation of the carbonate of zinc may even now be taking place in the ground to quite a large extent, especially in such deposits as are not below the water level, or are only periodically submerged. It is a well-known fact that the Drybone Diggings are usually comparatively free from water, and that the zinc ore below the water level is usually blende (sphalerite) with but little admixture of the carbonate. As the level of the water in the ground becomes gradually lower—and it is a well-known fact that it does—the atmosphere, together with surface water charged with carbonic acid, is permitted to act upon the blende, and a transformation from the sulphuret to the carbonate is the result.

The association of calcite with other minerals is such as to indicate that it must have been formed in crystals during at least two different periods. Stalactites of recent origin are found in the mines, which, on being fractured, show a distinct crystalline structure, and large planes of cleavage.

(TO BE CONTINUED.)

AMERICAN MACHINERY AT THE EXHIBITION.

A number of friction clutches and elevators are exhibited by Volney W. MASON & Co., of Providence, R. I. They were also shown at the Centennial.

The New York Safety Steam Power Company has a small engine, and T. SHRIVER & Co. some patent letter-presses.

Considerable space is occupied by a well-chosen and neatly arranged collection of patent shafting, pulleys, and bearings, from the Philadelphia works of GEORGE VAUX CRESSON, who also furnished the shafting for the American section.

J. W. DAUGHADAY & Co. have a number ofsmall hand printing-presses, which are shown at work, and attract considerable attention.

The Victor Sewing-Machine Company exhibit a number of specimens of the micrometer caliper, for machinists and tool-makers.

C. B. ROGERS & Co., Norwich, Conn., have a scroll-saw and a planer not yet set up, and H. J. BEAUDET, of Greenpoint, N. Y., exhibits a very pretty and ingenious cradle, swung by clock-work, and also a rocking-chair with a hinged back, so that it can be made to hold a pillow properly for receiving a baby.

CHARD & HOWE, of New York City, show their patent cups and Lubricene.

The motive power for the whole section, as well as for Norway and Sweden, is furnished by a highly finished and exceptionally fine horizontal engine of 125 horse-power, built and patented by JEROME WHEELOCK, of Worcester, Mass. The steam distribution resembles somewhat that of the CORLISS engine, with the important difference, however, that in the latter the cylinder is pierced by four steam ports, whereas the former has but two, the cut-off valves being placed directly behind the main valves. Notwithstanding the heavy fly-wheel, the WHEELOCK engine is reversed, stopped, and started with facility.

Near by we notice GALLY'S Universal Printing-Press and KNAPP'S Dovetailing Machine.

The WESTON Dynamo-Electric Machine Company, of Newark, N. J., have a number of machines shown at work with a nickel-bath for plating. We were told that other machines, yet to arrive, were especially adapted to the production of the electric light. The latter, it is claimed, will give currents of the same intensity as those of a much larger GRAMME machine, revolving considerably faster.

M. JABLOCHKOFF, the inventor of the electric candle, has already interested himself in these machines. His candle is daily receiving a wider application, and the extent of its ultimate success will depend largely on the dynamo-electric machine employed. The bulky Alliance machine, adopted at first, has been replaced by the GRAMME machine, which is much more compact than the preceding, but requires a very high speed of rotation. During the week, the Avenue de l'Opera and the Place du Théâtre Française were successfully lighted with the JABLOCHKOFF candles. The lamps are placed about four feet higher than the ordinary gas-lamps, and about 100 feet apart. Each lamp carries four candles, which are lighted in succession during the night by means of separate wires and currents. The space in front of the Corps Législatif is similarly lighted, and the Church of the Madeleine and the Arch of Triumph on the Champs Elysées, will soon be similarly illuminated. The candles are surrounded by opalized glass, so that the light is sifted and diffused in an agreeable manner. These extensive trials of the electric light will be followed with great interest, as they will furnish means for judging of the practical value of M. JABLOCHKOFF'S invention.

The Westinghouse Air-Brake Co. exhibits here, as at Philadelphia, a car fitted with the automatic brake. This has been visited by a large number of French engineers, who can not help being prepossessed in favor of the Westinghouse brake, owing to the recent reports of comparative experiments, published by French engineers. The brake has already been introduced on the Eastern and Parisian "Ceinture" railroads, and it is to be hoped that it will be favorably received by the other roads.

COLT'S armory exhibits a number of small printing-presses, and near by are some of BAXTER'S patent engines, and the STOW flexible shafts, both of which figured at the Centennial.

The extensive exhibits of machinery for textile fabrics, which attracted so much attention and praise at Philadelphia, are here represented by a couple of looms, making silk badges, etc.

One of the largest and finest displays is made by J. A. FAY & Co., of Cincinnati, who exhibit nineteen of the most important wood-working machines. Nearly all of these will soon be shown at work, but already the large crowds, attracted by the skillful manipulation of a scroll-saw, recall one of the most frequented portions of Machinery Hall at Philadelphia.

BLISS & WILLIAMS of Brooklyn, N. Y., expose some of their justly celebrated metal-working machines which were also shown at Philadelphia; and since one of the most praiseworthy departments of the American section of the Centennial, viz., machine-tools, had to be confined to such a small space in Paris, it would have been difficult, if not impossible, to have confided the chief place to better hands than those of BROWN, SHARPE & Co., of Providence, R. I. Their exhibit, when ready, will doubtless receive well-merited praise and atten ion. It is, however, not without regret that we notice the absence of such houses as that of WM. SELLERS & Co., which possess an international reputation.

TRUMP Bros., of Wilmington, Del., have a fine collection of scroll-saws and specimens cut by them; the MORSE Twist Drill Machine Company, of New Bedford, Mass., exhibits a neatly arranged collection of twist drills of all sizes, patent chucks, taps, etc.; the STEPHENS Patent Vise Company is represented as at Philadelphia; likewise the Northampton Emery Wheel Company, the SHOLES & GLIDDEN Type-Writer. HERRING & Co., of New York, exhibit a couple of their fine burglar-proof safes, the only ones we have yet seen in the Exposition.

The WHEELER & WILSON and American Sewing-Machine Companies are well represented. Mr. O. SELLECK, of New York, exhibits his patent universal feed machine, and a recent invention by which, with a very simple attachment, any sewing-machine may be made to embroider either with threads of the same or of two different colors. The J. R. BAKER Anti-Friction Metal Co. has specimens of white brass, etc. The LECHNER Mining Machine Co., of Columbus, O., exhibits a model of a coal-mining machine. The ALLEN Pneumatic Riveting Machine Co. shows in operation one of its ingenious machines for riveting boilers, etc., by means of compressed air.

The GOODYEAR & MCKAY Co., of New York, or rather of Paris (for it is the French house which exhibits), has a complete collection of machinery for making boots and shoes. It is one of the largest and most creditable exhibits of the section, and one of the most original of any we have yet seen in the Exposition.

A machine for crimping leather is shown by the J. W. JAMISON Co., of New York, and the Retort Gas Stove Co., of Providence, R. I., exhibits a number of gas-stands, etc. We have not mentioned the paper-bag machine of ADAMS & TAGGERT, of Pittsburg, and other exhibits which were not in place at the time of our visit.

Among the general exhibits of the United States section, outside of the Gallery of Machines, we notice particularly the very fine collection of dental apparatus of Mr. S. S. WHITE of Philadelphia; the exhibits of the chief fire-arms manufactories of the country; the large and well-arranged collection of axes of the DOUGLAS Axe Manufacturing Co., Boston; of saws made by H. DISSTON & SONS, Philadelphia, and the really artistic collection of tacks exhibited by A. FIELD & SONS, of Taunton, Mass.

The RUSSELL & ERWIN Manufacturing Co., of New Britain, Conn., has a remarkably fine assortment of locks, hinges, door fixings, etc., and the Yale Lock Co. exhibits a large number of its celebrated locks, its pavilion serving also as post-office for the section.

Outside of the building are a locomotive and a very large block of an-

* Condensed from *Geology and Topography of the Lead Region*, by MOSES STRONG, in *Geology of Wisconsin, Survey* 1873-77, Vol. II. Published under the direction of the Chief Geologist, 1877, Mr. T. E. CHAMBERLIN.

thracite coal exposed by the Philadelphia and Reading Co. There is also a street car built by J. G. Brill & Co., of Philadelphia.

The Annex contains a fine collection of agricultural implements, etc.

It is reported that a congress is soon to be held in Paris for the purpose of establishing an international wire gauge.—*Condensed from correspondence of The American Manufacturer.*

THE METALLURGY OF NICKEL.

By M. Badoureau, in Annales des Mines, Translated in Iron.

(*Continued from page* 62.)

Charcoal is burnt more especially in the reduction; 50 kilograms of nickel, that is, 210 kilograms of matte, require 30 hectoliters or 540 kilograms of charcoal. The charcoal consumed per kilogram of matte weighs 2·6 kilos., costing, at 78 fr. per ton, 0·21 fr. The remainder of the fuel costs about the half, or 0·10 fr.

The plant comprises three furnaces, various roasting-kilns, a water-wheel, an American crusher, and a complicated apparatus for the separation of the nickel and cobalt. An engineer has special charge of the foundry, and a chemist, with several workmen under his orders, is employed in the separation of the nickel and cobalt. Working expenses are probably not under 36,000 fr. per annum, or 0·30 fr. per kilogram of matte. Generalizing cost per kilogram of matte, we find:

Cost price of matte	1·10 fr.
Reagents	0·99
Fuel	0·31
Working expenses	0·30
	2·70 fr.

In return for this outlay there is a yield of 0·24 kilo. of nickel and 0·09 kilo. of cobalt oxide; that is, 1 kilo. of nickel and 0·37 kilo. of cobalt oxide cost 11·30 fr. Either the cobalt or nickel alone would pay expenses.

Details concerning Schladming.—A ton of ore costs 750 fr., and treatment at Hopfriesen 30 fr. Consequently 260 kilograms of speiss cost 780 fr., and 1 ton of speiss 3000 fr. + 40 fr. cost of carriage to Mandling. The cost of 1 kilogram of speiss delivered at Mandling is thus 3·04 fr. The costs of treatment at Mandling are as follows:

Refining in reverberatory furnace	0·29 fr.
Roasting refined speiss	0·18
Formation and reduction of cubes	0·15
	0·62 fr.

Working expenses, at 4100 fr. per annum, average 0·51 fr. per kilogram of speiss. In this amount, however, is included neither interest on money nor engineer's salary. Recapitulating the items of cost, we find them to be:

Cost price of speiss	3·03 fr.
Metallurgy	0·62
Working expenses	0·31
	3·97 fr.

We must not lose sight of the cobalt skin. It forms 10 per cent of the weight of speiss, and contains 30 per cent cobalt, yielding a weight of cobalt oxide equal to 4 per cent of the weight of speiss. If the skin of cobalt costs 0·60 fr. per kilogram to treat, the cost per kilogram of speiss is 0·06 fr. At a cost of 4·23 fr. a yield is obtained of 0·45 kilo. of nickel and 0·04 cobalt oxide. In other words, the yield for an outlay of 9·40 fr. is 1 kilogram of nickel and 0·09 kilogram cobalt oxide.

The Ores of New Caledonia.—So far I have concerned myself exclusively with the nickel ores found in Europe. But, although my information, I regret to say, is limited with regard to the silicated ores of New Caledonia, I can not pass them over. They contain neither sulphur nor arsenic, nor are they remarkable for the cobalt or copper associated with them, although both cobalt and copper are mined in New Caledonia. It follows that the nickel got from these ores is purer than that hitherto manufactured, and it may possibly be found fitting for purposes to which metal from common ores is unsuitable. It is to be hoped that the ore is really of one quality throughout the veins that have been opened—that what has been won is not merely the surface pickings of sulphureted or arsenical lodes. The ores of New Caledonia have been subjected since their discovery to very various processes of treatment both the wet way and dry. The best method of treatment is, perhaps, not yet settled upon.

Treatment the Dry Way.—M. Garnier proposes to reduce nickel silicate by carbon, and he has fitted up the Septêmes Works, near Marseilles, for treatment on this plan. New Caledonian ore undergoes at his hands treatment the details of which correspond in many cases with those of the metallurgy of iron. He makes both metallic nickel and a melted carbide of nickel, which is a real nickel pig, converted subsequently into a commercially pure nickel by a second refining. Nickel, however, is much nearer copper than iron in its properties, and has less affinity for carbon and iron than for sulphur, arsenic, antimony, and copper. I can not think iron or carbon fitting vehicles for bringing down nickel, and fancy it would answer better to reduce with sulphur or arsenic, in spite of the apparent absurdity of putting sulphur or arsenic into ores which are free at first from those substances. The awkwardness is a smaller one with sulphur than with arsenic, as the sulphur can be more easily driven off at last; but, on the other hand, sulphur is less efficient than arsenic in the extraction of the metal from the silicate. In any case, I am convinced that treatment by sulphur or arsenic is the best process for the complete and economical extraction of the nickel contained in the slag and oxidized residues yielded in treating New Caledonian ores the wet or dry way.

(TO BE CONTINUED.)

The Bear Paw Mountain Gold Discoveries.—A telegram to the *Inter-Ocean*, dated Sioux City, Iowa, July 30th, says: "The Bear Paw Mountain gold discoveries are creating considerable excitement in this section. W. H. Orcut, a former resident of this county, but who has for several years been keeping a wood-yard in the vicinity of Bear Paw, returned here to-day, and is going to commence immediately organizing a company of 250 men to start from here on the 25th of August, and to-day contracted for the steamer Eclipse, E. D. Coming, agent, to take the party to their destination. Mr. Orcut brings with him some very fine specimens of placer and quartz gold, and is very enthusiastic. These discoveries promise to make a greater stir than the Black Hills excitement of four years ago."

NEW PATENTS.

The following is a list of the new inventions relating to Iron, Coal, Mining Machinery, Chemical Apparatus, and the treating of Precious Metals, etc., from *The Official Gazette of the United States Patent Office* for the weeks ending May 28th and June 4th:

May 28th.

No. of Patent.	Title of Invention.	Name of Inventor.	Residence.
204,141	Multipolar Magnets	Asahel K. Eaton	Brooklyn, N. Y.
204,143	Well-Drilling Apparatus	J. B. Elliott	Moncton, Canada.
204,173	Steam Superheaters	Wm. Standing	De Soto, Ill.
204,181	Apparatus and Processes for Manufacturing Illuminating Gas	Henry W. Adams	Philadelphia, Pa.
204,203	Steam Generators	Michael Cullen (a)	Hartford, Conn.
204,244	Processes for Recovering Waste Sulphuric Acid	Andre Penissat (b)	Clermont Ferrand, France.
204,280	Pumps	Allen S. Baker	Evansville, Wis.
204,282	Steam-Engine Cylinders	Geo. E. Banner (c)	Newark, N. J.
204,297	Coating Lead Articles with Tin	John J. Crooke	New York, N. Y.
204,309	Brass-Melting Furnaces	John Fletcher	Ashton-under-Lyne, England.
204,339	Furnace Doors	Peter S. Kemon	Washington, D. C.
204,349	Stoves for Burning Crude Hydrocarbon and other Oils	Pearl Martin (d)	Medford, Mass.
204,351	Valve Gears for Engines	Lowell C. Mason	Providence, R. I.
204,368	Rubber Belting	Clement T. Petchell	Brooklyn, N. Y.
204,392	Metallurgic Furnaces	Henry Swindell	Allegheny, Pa.
204,413	Gas and Air Carbureters	C. C. Dusenbury (e)	New York, N. Y.

June 4th.

204,417	Manufacture of Picks	John Bestor	Pittsburg, Pa.
204,430	Rotary Engines	Bernard Frese (f)	Chicago, Ill.
204,433	Steam Pumping-Engines	Wm. C. Heister	Springfield, O.
204,437	Processes for Manufacturing Water Gas	E. J. Jerzmanowski	New York, N. Y.
204,445	Steam Radiators	Thos. W. H. Moseley	Hyde Park, Mass.
204,447	Amalgamators	S. I. Newberry	New York, N. Y.
204,512	Vacuum Packers for Oil Wells	Jas. C. Thompson	Barnhart's Mills, Pa.
204,535	Centrifugal Pumps	Charles Chedwick (g)	Hannibal, Mo.
204,534	Processes and Apparatus for Manufacturing Illuminating Gas	Charles Gearing (h)	Pittsburg, Pa.
204,555	Processes and Apparatus for Manufacturing Illuminating and Heating Gas	Charles Gearing (h)	Pittsburg, Pa.
204,559	Speaking Telephone	Elisha Gray	Chicago, Ill.
204,560	Speaking Telephone	Elisha Gray	Chicago, Ill.
204,577	Apparatus for Washing Gases	Daniel N. Jones (i)	Johnstown, Pa.
204,628	Miners' Lamps	James C. Smythe (j)	Plymouth, Pa.

(a) Assignor ½ right to Matthew Hogan, Hartford, Conn.
(b) Assignor to himself and Wm. H. Nichols, Brooklyn, N. Y.
(c) Assignor ½ right to Anna Gray Fales, Hartford, Conn.
(d) Assignor ¼ right to Selwyn Z. Bowman, Somerville, Mass.
(e) Assignor to Winn Manufacturing Co., New York.
(f) Assignor ½ right to Henry Lawrence, Chicago, Ill.
(g) Assignor ⅔ right to Peter B. Groat, Hannibal, Mo., and John B. Schott, Quincy, Ill.
(h) Assignor ½ right to Samuel Harper, Pittsburg, Pa.
(i) Assignor ½ right to Cambria Iron Co., Johnstown, Pa.
(j) Assignor to Wm. Smythe, Plymouth, Pa.

TUNNEL TIMBERING AND ARCHING.*

(*Continued from page* 61.)

THE AUSTRIAN SYSTEM.

The Oberau Tunnel, on the Leipsic-Dresden line, was the first German railroad tunnel. It was built in 1837–39, is 904 Saxon ells (1680 feet) long, and was driven through green sand, marl, gneiss, and granite (the latter very seamy).

Fig. 1 shows the original system of rafter-timbering introduced, a cap *b* being supported by the slanting legs *a a* footed at *m*. When the footings for these legs proved poor, cross-pieces *c* were used. When *c* did not give

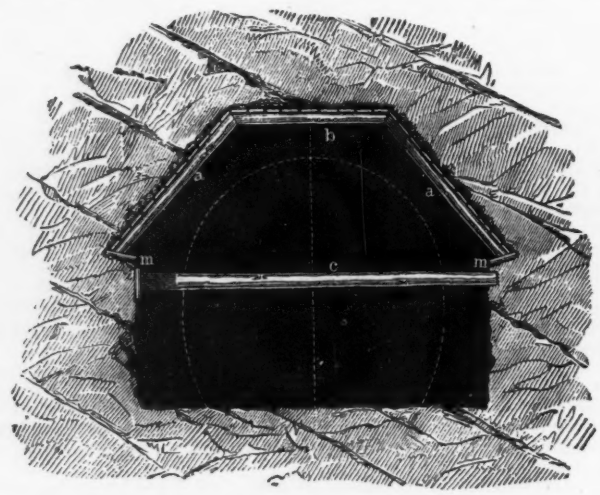


Fig. 1.—The Oberau Tunnel.

sufficient stability, bars *u* (Fig. 2) were laid under the collars *b*, and a long leg *s* set under the same. Other longitudinal bars *l* were laid on the cross-brace *c*, and props *p* raised from them to the side-legs. Again, Fig. 3 shows another arrangement where *s'* transfers the pressure on the right to *s*, supported and braced by *p*, *n*, *q'*, and *q*. This especial framing was used where there was, for instance, an unusual pressure from the right. If the pressure was not local, but generally exerted over the whole cross-section, the timbering was placed as shown in Fig. 4.

The timbering used in this tunnel has been noted by Mr. Rziha as a remarkable example of the early adoption of approximately correct timbering principles. It will be recognized also by American engineers as the original system used in this country in our early tunnels; it is indeed

* Condensed from *A Treatise on Tunneling, Explosive Compounds, and Rock Drills.* By Henry S. Drinker, Mining and Civil Engineer. Published by John Wiley & Sons, New York. (Copy-righted.)

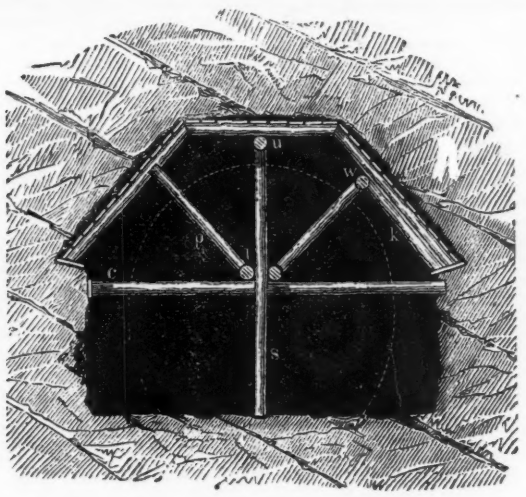


FIG. 2.—THE OBERAU TUNNEL.

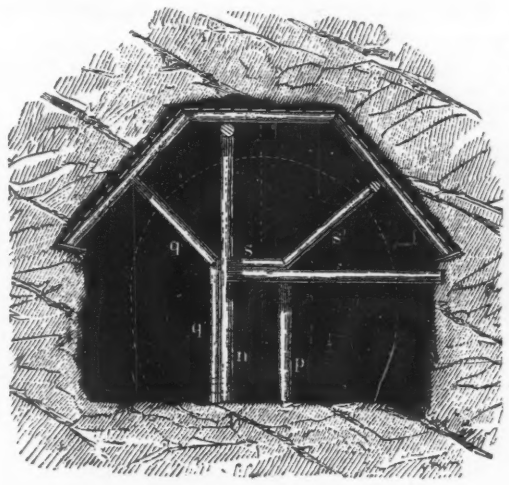


FIG. 3.—THE OBERAU TUNNEL.

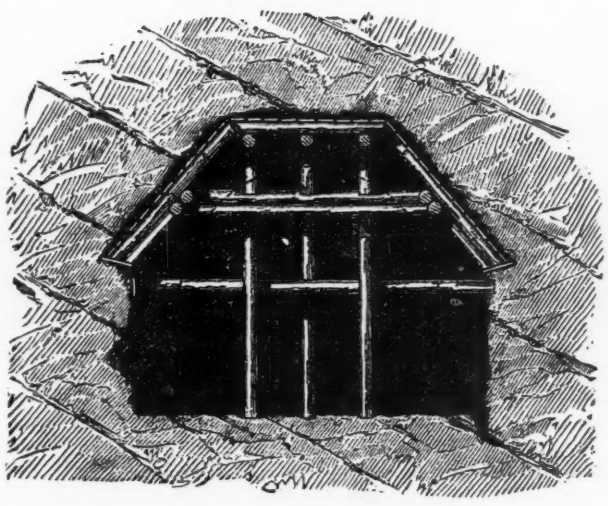


FIG. 4.—THE OBERAU TUNNEL.

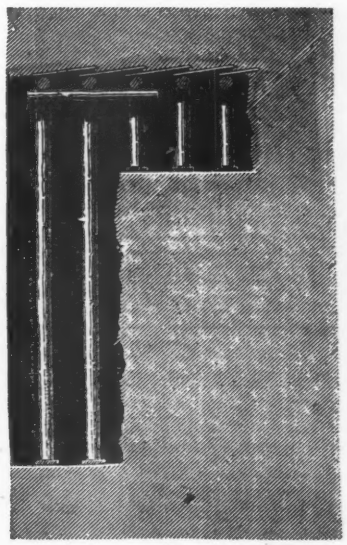


FIG. 5.

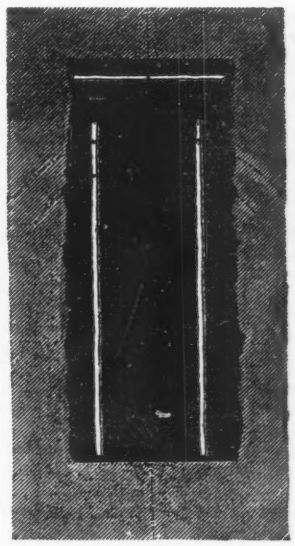


FIG. 6.

THE GUMPOLDSKIRCH TUNNEL.

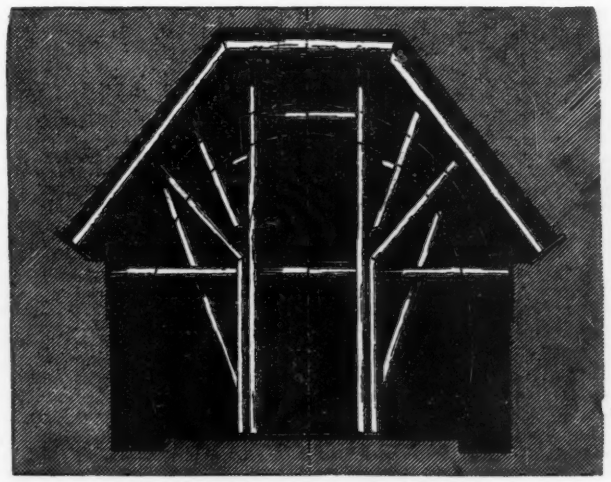


FIG. 7.—THE GUMPOLDSKIRCH TUNNEL.

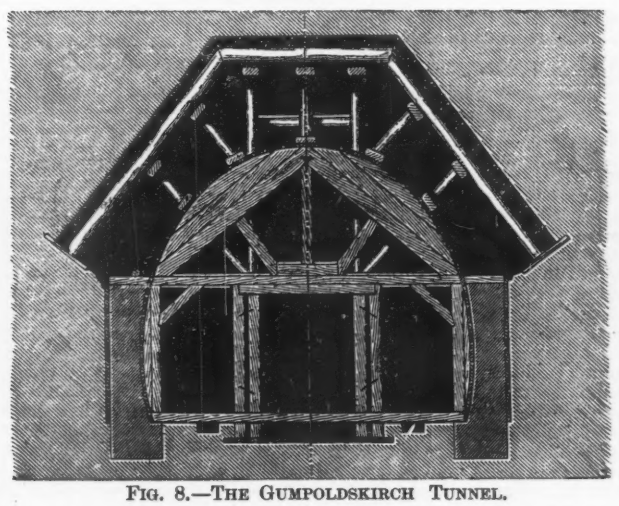


FIG. 8.—THE GUMPOLDSKIRCH TUNNEL.

still in vogue for most cases of loose rock-timbering where five or more block-timbering is not preferred. The system may be said to combine, perhaps, the following advantages:

1. The mining was carried on in sections, embracing the whole cross-section of the tunnel.

2. The pressure of the roof was met by the spar-timbering used. ("Sparren-zimmerung" is simply the Austrian term for cross-rafter timbering.)

3. When the spar-timbers—that is, the cap and slanting legs—were not sufficiently strong, the additional bracing was well applied.

4. The support offered to the planes of pressure was at right angles to them.

5. The concentration of pressure at one point was not only avoided, but the system admitted of the transfer of pressure from side-wall to side-wall.

6. The timbers were not weakened by unnecessary mortising or joining.

The originality of the timbering used attracted the attention of engineers, and when, in 1839, the first Austrian tunnel was projected (the Gumpoldskirch Tunnel on the Vienna-Gloggnitz line), the fundamental principles of construction used in the Oberau Tunnel were adopted in the latter by Mr. Keissler, the engineer in charge. It is said that in this tunnel the present Austrian system of timbering, shadowed forth in the Oberau Tunnel, was brought into definite shape.

A bottom heading was first driven without reference to the other parts of the tunnel; then a top-heading so timbered that the collars served as part of the succeeding full-timber system—that is, they were placed high enough to admit the longitudinal bars which were next introduced as soon as this top-heading had been driven a sufficient distance. These bars were propped temporarily in the top-heading at their fore-end, and at the back on long legs extending down to the floor of the tunnel (Fig. 5). The top-heading was enlarged down as shown in Figs. 6 and 7. Fig. 8 gives the centers in place and the masonry in process of erection. It will be seen that by the system used the slanting side-legs of the spar-timbers are braced by pieces abutting against the center set.

(TO BE CONTINUED.)

GALLIUM AND ALUMINIUM ALLOYS.

By Lecoq de Boisbaudran, in Comptes Rendus, Translated in Iron.

Lately I have been engaged in preparing alloys of gallium with several metals; I shall have the honor of laying them before the Academy as soon as I have completed my investigations into their properties. At present I confine my remarks to the alloys of gallium and aluminium, to which my attention has been first directed.

When the proportion of aluminium has to be considerable, the two metals are heated at temperatures which do not exceed a dull red. Alloys thus obtained remain brilliant, and take up no particularly noticeable amount of oxygen during their preparation. On cooling they are solid, but brittle and non-resistant, even when the proportion of aluminium is sufficient to carry the melting-point up to a dull red. They decompose cold water, and still better water at 40° C.; the decomposition being accompanied with an increase in temperature, the disengagement of hydrogen, and the formation of a chocolate-brown powder, which is finally resolved into white flakes of alumina. Almost the whole amount of gallium is liberated in the form of globules, which seem to be entirely destitute of aluminium. These alloys most frequently decompose water in the same way as an amalgam which contains a moderate amount of sodium, but for certain preparations the briskness of the decomposition can only be compared with that effected by sodium itself. The *slow* disengagement of hydrogen effected by a solid alloy is accelerated very much by the contact of a globule of liquid gallium. It is tolerably safe to assume the creation of an electric couple, the aluminium of which is the oxidizable metal.

Superfused gallium melts aluminium, even below 15° C., giving rise to liquid or pasty alloys of a high luster, little acted on by the oxygen of the atmosphere, and possessing in a high degree the property of decomposing water. The brisk decomposition of water brought about by the cold-made liquid alloy seems to need a certain initiation; no doubt a first electric couple must be set up. In the ordinary way this condition is realized spontaneously; but it has occurred to me before now to throw a globule of alloy into water without effect. A second globule, if taken from the same mass of matter as the first, was immediately attacked, and as soon as it touched the first, this was at once made active.

Cold-made liquid alloy gives, on contact with a trace of solid gallium, alloys which have the appearance of gallium, and do not effect any sensible decomposition of water. The alloy remaining over from the crystals when these have been separated out, seems to have lost a part of its power to act on the water. If the whole is re-melted at the heat of the hand, the alloy is found to have regained its former susceptibility.

These properties recall the observations which have been made on alloys by several men of science. I may cite (1) the amalgams of aluminium, iron, nickel, and cobalt, and the alloys of platina and lead, studied to so good effect by M. CAILLELET, M. DAMOUR, and MM. H. SAINTE-CLAIRE DEVILLE and DEBRAY; and (2), the physical investigations of M. JULES REGNAULD, who has shown that amalgams of zinc and cadmium possess in the battery electromotor powers which depend on the quantity of heat absorbed or disengaged during the amalgamation of metals. In this regard gallium has properties in common with mercury and lead.

ON A NEW FURNACE FOR MERCURY ORES.*

BY A. PICHLER.

At the mines of the Illyrian Quicksilver Company, near Neumarktl, in Carinthia (of which the author is the director), mercury ores occur interspersed through limestone in such a manner that the average assay of the rock treated does not exceed 0·8 per cent (18 lbs. of mercury per ton of rock). As this is not rich enough to bear the cost of complex methods of dressing and smelting, the furnace to be described has been designed with a view of working continuously, and without any special requirements in the way of machinery or skilled labor. It consists essentially of a cylindrical shaft, 30 feet high, and 4 feet 3 inches internal diameter, formed of an outer shell of boiler plate 0·315 inch thick, with an internal lining of fire-brick-work 6·3 inches thick; an intermediate space of 0·4 inch, allowed for expansion of the brickwork, being filled with graphite. This is mounted on a pedestal of masonry, and is provided with three openings, placed radially and equidistant at the bottom, for drawing the exhausted rock, and a charging and gas-collecting arrangement at the top, all of which can be closed hermetically when the furnace is at work. The charging apparatus consists of a cast-iron funnel, formed by a cone with a cylindrical tube descending some distance into the gas-collecting space in the furnace, closed by a movable cone, or "bell," at the bottom of the tube, a parallel cone at the neck of the funnel, and a flat plate covering the outer rim, secured by a water-joint. Each of these is manipulated by an independent system of suspension chains and counterpoises, so that in charging, two of the three stoppers are always closed. The gases are taken off by a side tube and down-come as in an ordinary blast furnace, and pass subsequently through a pair of serpentine condensers, formed of cast-iron tubes kept cool by an external circulation of water, two large chambers, and an inclined system of wooden labyrinth flues, terminating in a tower with a waterfall blast or trompe. The total length traveled by the smoke before it is discharged is about 350 feet, the draught being regulated by a damper placed at the end of the flue between it and the water blast.

The ore, as prepared for smelting, is divided into coarse and fine classes, the former including pieces from double the size of the fist, down to that of a walnut, and the latter every thing smaller. There is no constant relation between the two, the large varying from nine tenths to one half of the total produce of the mine. The working is generally similar to that of an ordinary continuous kiln. The charges are introduced in the proportion of 11·3 cubic feet of ore to 1·75 cubic feet of charcoal, the draught being so arranged that seven to eight charges pass through daily. In working, a quantity of ore equal to half a charge is constantly kept in the top funnel, and at charging time is dropped into the tube above the lower bell by raising the top valve. The top cover is then opened and the charcoal is dropped into the tube, and upon it the second half-charge. The top valve is then closed, a third half-charge is thrown into the top funnel, the cover lowered and luted; the whole operation requiring about four minutes; after which the lower valve is opened, and the materials in the tube are allowed to drop into the furnace. After this an equal volume of spent rock is drawn at the lower passages, the operation being repeated at intervals of one hour and a half to one hour and three quarters. As the yield of mercury depends very greatly upon the management of the draught, great care is required in regulating the opening of the damper. For this purpose gold plates are inserted at the end of the condenser flue and in the drawing passages. If the draught is too strong, mercury is carried over and whitens the plate at the end of the flue; if it is too weak, the metal shows itself on those in the drawing holes; but when properly regulated, none of the exposed plates are in any way tarnished. The actual opening of the damper varies from 0·6 inch to 3·15 inches, according to the proportion of small ore in the charge. The auxiliary water blast has not yet been found necessary in practice. The capacity of the furnace corresponds to twenty-three charges; each charge, therefore, is forty-six hours in passing through, which time is found to be amply sufficient to exhaust the mercury in the stone. As the latter contains carbonate of lime, no flux is necessary. The mercurial soot, containing 50 per cent of mercury, obtained in cleaning out the condensers, is worked into balls with lime and charged with the ore.

During a working period of five months, 9966 lbs. of mercurial products were obtained from the various parts of the condensers. Of this the first length of 70 feet gave 4382 lbs. during the working, and 3535 lbs. on cleaning up; or together about 80 per cent of the total. A second length of 100 feet, including the first half of the condenser, gave 1599 lbs.; a third, of about the same length, being the second half of the condenser, 407 lbs.; and the ultimate system of soot-chambers and tail-flues, only 42 lbs. The proportion of liquid mercury to soot obtained was as 1·8 to 1 during the working, and 1 to 3·5 on clearing up, and the whole produce 39 of the former to 61 of the latter. H. B.

* Abstract of a paper in the *Zeitschrift des Berg- und Hüttenmännischen Vereines für Kärnten*, vol. ix., pp. 322-38. From the Proceedings of the Institution of Civil Engineers of London, edited by James Forrest, Secretary.

PETROLEUM NOTES.

COMPARATIVE SYNOPSIS OF REPORTS FOR MAY AND JUNE, 1878 AND 1877.

42 GALLONS = 1 BARREL.		1878.		1877.	
		May, 31 days.	June, 30 days.	May, 31 days.	June, 30 days.
Stock at the Wells	Bbls.	360,300	360,300	111,910	109,224
Production for the month	"	1,264,862	1,217,212	1,127,594	1,130,790
Daily average production	"	40,802	40,575	36,374	37,693
Iron tank stock	"	4,735,758	4,817,889	3,061,098	2,803,450
Total stock in the region	"	4,996,058	5,078,189	3,173,008	2,912,674
Shipments out of the region	"	960,894	1,135,119	1,234,324	1,391,124
Number of producing wells		9,460	9,605	7,037	7,352
Number of drilling wells		376	266	512	395
Number drilling wells completed		470	269	320	403
Aggregate daily production of new wells in bbls		6,851	3,788	4,813	7,262
		April.*	May.*	April.	May.
Exports from New York	Gals.	14,876,996	14,571,985	10,705,105	32,240,471
" " Boston	"	339,382	350,961	190,151	877,168
" " Philadelphia	"	2,708,229	4,271,416	2,681,892	6,005,225
" " Baltimore	"	2,512,025	2,731,195	1,688,231	3,448,409
" " Richmond	"	10,000	.....	.....	.....
" " San Francisco	"	24,830	6,829	.....	149,940
Total exports	Gals.	20,471,462	21,932,386	15,265,379	42,721,213
Production in Pa	Bbls.	1,195,890	1,264,862	972,810	1,127,594

* Official. —*Stowell's Petroleum Reporter, July* 15, 1878

The Petroleum Outlook.—The Titusville *Herald* says:

"There has during the past week been a fierce struggle among the giants of the petroleum trade, but the price of the staple has fluctuated to only a very trifling extent. One peculiar feature is the steady decline in the production caused by the extremely low price. The number of wells going down are not so large as during June, and it seems now to be only a question of time when nature's own remedy will so far equalize the supply to the demand that a fair and remunerative price will be obtained for the staple. The new plan of the Grand Council of Producers is meeting with a great degree of favor, and a vigorous effort will be made to carry it out. It will, no doubt, tend to give the producers a control over their own product which they could never hope to exercise without combination. The retired stock could as well be held under their direction as under that of the United Pipe Lines.

"The speculative capital which now holds the greater portion of the stocks above ground would, however, have to be replaced by the producers themselves, which they could well afford to do if thereby the price were enhanced. If they could get $4 per barrel for 20,000 barrels per day, the temptation to keep within the rules of the organization would be greater than to violate them, besides the retired stock held by each individual member would be security sufficient to hold the entire body under perfect and systematic discipline and regulation. The producers have every thing to gain and nothing to lose by a fair trial of the plan. It is possible that the production may yet fall off before winter to an extent that would enable the plan to be started under very favorable auspices."

Kentucky Oil-Wells.—"The oil-well at McKinnay Station, Ky., is considered a settled fact. It is claimed that the well is worth $100 per day. Mr. Scott, who has charge of the work, feels confident of finding oil in abundance. The well is now down 300 feet, and fills up in twenty-four hours 200 feet with oil. The people are feeling very good over the prospects, and think the day not far distant when they will have plenty of coal-oil to sell and give away."

Petroleum in California.—The California Star Oil Works Company has now five wells in operation near Andrew's Station, about thirty-five miles from Los Angeles. From two of the wells the oil flows voluntarily, and in considerable quantity, while from the other three it is pumped out. These wells are yielding at the rate of eighty barrels daily, equal to 3360 gallons. There are also other wells in the same county which are remunerating the owners.

Professor Gunning is reported to have said that there is an abundance of earth oil in that portion of the State. The refining is effected at the place of production. The transportation to San Francisco is by the cars of the Southern Pacific Railroad, and through the use of the patent tanks of the Continental Oil Company. The objection to tank cars has been that they have to go light one way. This difficulty is overcome by the tanks now in use on the Southern Pacific; they occupy so little space that there is room left for nearly a full car-load of freight on the return trip. The cars are loaded direct from the refinery by means of pipes, and upon arrival here are switched off and run within a block of the works, where a connection is made with pipes under the ground, and the petroleum flows directly into the tanks in the company's warehouse.

Petroleum in Utah.—The latest petroleum discovery made in this territory is in

the Spanish Fork Cañon, Utah County. When first discovered, it was a matter of doubt whether it was genuine, but a test has revealed that the article is real and appears to be of high quality. After sinking for about two feet, the rock produced twenty to twenty-five per centum of oil, and at about eight feet it will produce perhaps all of fifty per centum. Some twelve gallons of the crude oil were taken from the rock, and specimens have been sent to San Francisco, Chicago, New York, and Ohio for chemical analysis. Oil men in Salt Lake City pronounce the article good.

The Cape Breton Oil-Field.—The *Maritime Journal* says: "It may seem a wonderful circumstance that the Island of Cape Breton, which is known to possess 200 square miles of coal area, should also possess a large oil district; but if it is true that coal is the mother of oil or even its next-door neighbor, the circumstance is just what might be expected. Whether the oil area will equal that of the coal or not, will be determined only by actual development. It is certain, however, that the usual surface indications extend over a very large section of country, including portions of the counties of Inverness, Victoria, and probably Cape Breton. It is no longer of any practical moment to discuss these indications since the holes which have already been put down have been successful in finding the liquid deposits. The question now remaining to be decided is one of quantity. The general features of the district very closely resemble those of the Pennsylvania oil regions. The product already obtained is a very superior quality of lubricating oil of 127° gravity, but it is presumed that the deeper strata will yield the lighter kind of oil which forms so large an article of commerce at the present day. The facility for shipment is one feature of this district that will give it a great advantage over any other oil-field yet developed. Fifteen miles of pipe-line would amply suffice to transport the product to good shipping points during the summer season, while a line of fifty miles, or perhaps less, would reach the Strait of Canso, where shipments could be made all the year around. It will also be seen that this field has the advantage of being nearer to the great oil markets of the world than that of Pennsylvania."

The Petrolia (Ontario) Oil Shipments.—The Petrolia *Advertiser* contains the following:

Comparative Aggregate Shipments of Petroleum—reduced to barrels of 40 gallons each—from Petrolia, Ontario, Canada, during the last five years up to date:

From Jan. 1 to July 25, 1878....	80,137	bbls.
" " to " " 1877....	251,119	"
" " to " " 1876....	126,307	"
" " to " " 1875....	77,467	"
" " to " " 1874....	211,044	"

Comparative Shipments of Crude Petroleum—reduced to barrels of 40 gallons each—from Petrolia, Ontario, Canada, during the last five years up to date:

From Jan. 1 to July 25, 1878 ..	67,195	bbls.
" 1 " " 1877....	143,213	"
" 1 " " 1876....	110,691	"
" 1 " " 1875....	71,087	"
" 1 " " 1874....	101,060	"

Wages in the Oil Regions.—McKinney Bros. and other firms at Millerstown, Pa., have reduced oil pumpers' wages to $1.50 per day. The men accepted the reduction with a good grace, as they well know that in many cases they are getting more money out of the wells than the owners are at the present low prices for oil.

A correspondent of the Martinsburg (Pa.) *Voice* writes: "Wages in the oil country are lower now than ever before. When oil was below a dollar in 1876, men received two dollars per day; since then, though the price of oil has gone up to four dollars per barrel, wages have never appreciated to what they were before they were reduced. Men are now expected to do extras on all wells owned by their employers without extra compensation."

Oil Certificates as Collateral.—"A new and important collateral for loans—oil certificates—has come into use in the oil regions of Pennsylvania, and especially at Pittsburg, where they are used largely, the subject matter has become of great practical interest. The *Gazette* considers them, as a security, safe and readily available. The United Pipe Line there, is a concern of $5,000,000 capital, and the profits which it makes from its storage and pipeage charge are so large as to insure its responsibility. The certificates represent oil in its tanks, and their value can be exactly ascertained at any moment of the business day, on the exchanges, either at Pittsburg or in Parker, Oil City, or Titusville. While their value is much more fluctuating than that of bonds or bank shares generally used as collateral, the arrangements for exactly determining such value at any time are very complete."

The Market at New York.—The New York *Shipping List* of July 31st contains the following review and statistics of the petroleum market:

"Crude.—The demand continues moderate, but prices are without important change, quoted 6¼ cents bulk, and 8½@8¾ bbls. Sales are reported of about 16,000 bbls. within the range. We see it stated that the oil producers are organizing associations under the limited partnership act for the purpose of carrying into effect the recommendations of the Producers' Union for fixing the prices of oil offered in the market, and limiting the offerings to sales at the prices fixed.

"Refined.—The market has ruled easier, and previous prices have been shaded by about one eighth of a cent, at which large transactions have been consummated, comprising about 100,000 bbls. at 10½ cents in Philadelphia and Baltimore, 10⅝ here for immediate and future delivery, closing quiet. We also note sales of about 60,000 cases on private terms.

"Naphtha remains quiet at the improvement before noticed. We quote 7¼ cents as the nominal price. Sales are reported of 7000 bbls. on private terms.

"Residuum is still dull and nominal at 7 cents, but we learn of no transactions.

"Certificates.—The dealings on 'Change have been moderate, comprising 95,000 bbls. United, yesterday's transactions, within the range of 97½@102½ cents regular. Oil City quiet and steady, $1.02½ bid; Titusville quiet and nominal, $1.01¼ bid; Parker's steady, $1.02½ bid.

Exports of Refined, Crude, or Naphtha.

	1878. Gals.	1877. Gals.
Since our last	1,919,394	.....
Previously since January 1st	100,709,137	130,256,613
From other ports	42,559,861	49,543,341
Total	145,188,392	179,799,954

"LONDON, July 30.—Refined, 9¼d.; do. last four months, 9½d.

"ANTWERP, July 30.—Refined, 27f."

BRITISH ASSOCIATION.—A large number of foreign men of science have promised to be present at the Dublin meeting of the British Association. Visits to almost every place of interest within easy distance of the city will be arranged for, and the usually vexing questions of locomotion and commissariat carefully attended to.—*Engineer.*

ANOTHER RAILROAD IN THE MONONGAHELA VALLEY.—The Pittsburg *Telegraph* of the 25th ult. contains the following:

"The amount required for extending the Pittsburg, Virginia, and Charleston Railroad to Brownsville has all been subscribed, and the only difficulty that now stands in the way is the securing of the right of way from farmers, through whose lands the road will run. It will cost $350,000 to make the extension, and the greater portion of this money would be paid out in the district traversed by the road. This certainly should be an object to the citizens to extend the required facilities for the construction of the road, and, in addition, the outlet furnished for the immense coal product of that region is a consideration that should have great weight. The Pittsburg, Virginia, and Charleston Railroad has already a very extensive coal traffic, and the row of houses between the tracks and Carson street, in what was formerly South Pittsburg, have been removed, and the lots are to be converted into coal yards. A number of sidings have been built, and other improvements made to accommodate this large and growing transportation of coal from the Monongahela Valley to this city."

MINING NEWS.

ARIZONA.

We take the following from the Prescott *Miner* of the 19th of July: "The Tiptop company's mill at Gillett has been idle for the last four weeks on account of the failure of water in the creek with which to supply the mill. The company have caused a large well to be dug and a drift made into the channel of the creek which will supply the necessary amount and forever do away with a hinderance which has been of many thousand dollars' damage. This mine has heretofore been steadily worked, and the amount of ore now on the dumps at both mill and mine is worth several hundred thousand dollars. The water is coming into the well, and the mill will start up during the early part of the coming week, when will be turned out an average of over two thousand dollars daily. The recent assessment of 50 cents per share on the stock of this company has caused much excitement and anxiety among the stockholders, many of whom reside in the East. The Tiptop mine has been regarded as one of the soundest and most surely productive of the Arizona mines; it was known to have $110,000 in bullion deposited in San Francisco; and the stockholders have been expecting a dividend since May last. Now, instead of a dividend, comes this notice of an assessment of 50 cents per share; and not only is the disappointment keen, but suspicions of unfairness, of dishonesty, and of rings are excited. Other leads in the Tiptop district continue to yield largely in high-grade ore, and the mines are well thought of by all who have examined them.

"The Peck is and has been for some time yielding about $2000 daily, all of which is being shipped to California. This company employs about 100 men.

"At the Tiger work is going on and plenty of very fine ore is being torn from its dark bed and raised to the light of day. At the Kit Carson, Silver Flake, Silver Belt, and Prince mines, many men are working in the shafts, tunnels, drifts, and cuts with satisfactory results. The Agua Fria Smelter is soon to be started up by Mr. C. B. Foster, which will be another source from which to swell the yield of bullion from Yavapai. The Senator mine is now in competent hands, and will also do its share in sending out gold bullion.

"Parties in from Lynx Creek to-day report that the placer miners are taking out considerable dust, some of them making $8 to $10 per day.

"The gold bullion proceeds from 45 tons of Senator ore worked by Superintendent Chipman, at the Senator mill, for the owners—Messrs. Bowers and Richards—was melted and assayed, and proved to be worth $941, something over $20 per ton. The ore worked was found upon the dump-pile at the mill, being some of that left by former owners."

AN IMPORTANT STRIKE BY THE M'MILLEN SILVER MINING CO.

The following, concerning the recent strike made by this company, is taken from the *Silver Belt*: "On June 28th the main ledge of the Stonewall Jackson mine was cut at a depth of 125 feet by a cross-cut from the 'stratum' shaft. After passing through a clay gouge of about one foot in thickness, a bunch of chloride ore was found on the west side of the drift, from which an assay was made, with the result of 2866 ounces of silver per ton. On entering four feet into the ledge, ore was found rich in chlorides, almost from top to bottom of the drift. Two other assays made from this resulted in $1500 and $1600 per ton. So far only portions of the ledge matter had been saved. To test the matter of the richness of the whole body of ore, one ton was worked, with a result of 290 ounces, or over $300 per ton. Since working this ton the whole ledge-matter is believed to be good milling ore, and tests will be made during the coming week by assorting and working in grades.

"Besides the mill-ore, the ledge carries silver glance in large quantities. One piece of native silver was taken out on Friday last that weighs over one hundred pounds. More than a ton of silver glance is now in the ore-house.

"The cross-cut is now in 14 feet, and shows rich chloride ore all along the drift. The rich pay ore, silver glance, and native silver extend about 4 feet from the gouge, lying on the foot-wall of the ledge. This is the first body of ore yet found in the main ledge. The McMillen Silver Mining Company have spent several thousand dollars in prospecting the main ledge, but, up to this strike, had no adequate returns for their money.

"The drift, or cross-cut, which led to this body of ore, was run in ten days, at a cost of less than three hundred dollars. The shaft is now down on the main ledge 100 feet, and the bottom of the shaft is entering the main ledge. The Superintendent, Mr. Freeman, thinks that in 50 feet it will penetrate the foot-wall, from which he proposes to drift to the present body of ore, a distance of 75 feet. This will give good ventilation and prospect at this level about 125 feet of main ledge."

IDAHO.

The Owyhee *Avalanche* of July 13th, 1878, publishes the following in regard to the mining prospects of Idaho:

"There never has been a time during the past six years when the mining outlook of Silver City and vicinity looked more promising than it does at present. The grand discoveries which have within the past few weeks come to light on Florida Mountain have had a wonderful effect in creating a hopeful feeling here. There is no longer any despondency prevailing regarding the future of the camp. It is a settled fact that the Black Jack is turning out immensely, and the ore which is being daily sent to the mill from the north drift of the mine makes a steady yield of over $200 to the ton. The progress of the work reveals, too, the cheering fact that the ledge is steadily improving, and that the great bonanza of the country is right in the heart of Florida Mountain. This is no imaginary statement. It is borne out by facts, in confirmation of which we point to the results of the crushings at the Ellmore Mill, which is turning out bullion at the rate of $3000 per day, and, if the rock continues to improve as it has for the past week, the daily bullion yield will soon reach $4000. We have seen times here during the past year when a bar of bullion was a refreshing and novel sight; now we see these bars by the dozen, and ranging in value from $2000 to $4000 each; and capitalists who have insisted, as a preliminary to making investments here, that they 'must see the bullion first,' will be convinced now that there is no longer any doubt about the productiveness of our mines. The Florida Mountain bonanza surpasses the Poorman and Golden Chariot in their most palmy days, and no one acquainted with its extent and richness will be at all surprised if the development any time during the coming month or two should be such as to fully justify the belief that we have a great mine in this immediate vicinity.

"The new hoisting works for the Buffalo mine, which is located at Atlanta, are on the way from Kelton, and will be erected and in operation before the first of September. The shaft will then be sunk a further depth of two hundred feet. At present there are about a dozen men employed at the mine. There is a considerable quantity of rock out now awaiting crushing. The mill started up last Saturday on Monarch Rock. Some seventeen men are at work in the Monarch mine. A contract was recently let to Messrs. C. K. Davis and George Gregory for working 1450 feet of tunnel and the same distance of cross-cut. The Monarch steadily continues its yield of good rock, and is under judicious management. A new mine is being worked by Messrs. Davis and Peddler and is reported to have splendid prospects. A new mine has been discovered about six miles north of Atlanta, and if all reports are correct it is an immense bonanza. It is rumored that the owners have been offered $100,000 for the property, and refused it."

THE ARGYLE PLACER DISTRICT.

A correspondent to the *Tribune*, writing from this district under date of July 18th, says: "Knowing your desire to publish all the news of new mining districts, I will give you a description of one we have lately struck on Snake River, where fine gold mining had been carried on for years with rockers, till all the richest ground had been worked, as we supposed. This district is situated on the south side of Snake River, at what is known as Fall Creek.

It is located some six miles above and below Fall Creek. Along the banks of the Snake River the bar is from a half-mile to a mile wide, the gravel is from ten to twenty feet in thickness, and every shovelful prospects well in fine gold. There is about thirty-five feet fall to the river, so that it all can be worked to the greatest advantage. Water is plenty for all purposes, there being three large creeks running through the ground. The route to get here is *via* Kelton, Utah, thence by Northwestern stage to Marsh Fasin, where a private conveyance can be had to come to the mines. The whole distance from Kelton is seventy miles. I would say to poor men that it is entirely useless for them to come, as there is no work to be had, and every inch of available ground is taken, and every drop of water is located. The size of each claim is twenty acres, which will take a machine ten years to work out at the rate the one in operation is working at present with six men. The creeks being fed from numerous warm springs, we can work the year round."

NEVADA.

We take the following from the *Gold Hill News* of the 24th ult.:

"Stocks are down and every body correspondingly blue. The fall in the other stocks is generally credited to sympathy with the heavy break in Ophir during the past three days. Just what is causing that break appears to be a mystery. Before cross-cut No. 2 on the 2000 level had neared the ore vein, the stock was stiff at $58 per share, and now that the drift is undoubtedly in the ore, and the management refuse to either let any person into the mine, or make known the situation themselves, until the regular day set for that purpose, the public knowing no more than they did when the stock was $58, down it steadily goes until it has reached $42, with every indication of a still greater drop.

"The joint yield of ore from the bonanza mines for the week has been about 500 tons per day. A new and somewhat important development has been made in a drift eastward on the 1200 level of the Consolidated Virginia. At that point a new vein of rich ore has been struck entirely east of any thing heretofore developed in that portion of the mine. This find, so far, is not very large, but may lead to something much better.

"There is also a decided improvement in the Succor mine on the 1050 level, inducing the hope that a paying deposit of ore is not far away.

"The quartz improvement in Sierra Nevada continues downward with a steady strengthening, which gives great confidence in the value of the development.

"The trouble in the Best and Belcher and Gould and Curry will soon be overcome and the two mines connected ready for cross-cutting on the 1900 level.

"The Chollar-Potosi Combination Shaft has started a drift for a drain tunnel on their 1600 level to connect with the Sutro Tunnel. That shaft is now down 2265 feet. The tunnel level is equivalent to the 1605-foot level of the shaft, which, at the present depth of the shaft, will leave a distance of only 660 feet to pump water to get it up to the tunnel level.

"The Sutro Tunnel is steadily advancing toward the west wall of the lode, and is beginning to take already a little of the surface seepage of the Savage. Since connection with the Savage workings, the advancement of the header has been somewhat slower, owing to changes in the arrangements and the present great heat, but better progress will be made hereafter, and connection will be completed very shortly with the main incline of this mine. Total length of tunnel to date, 20,073 feet.

"The flood of water on the 2000 level of the Julia mine is gradually receding before the untiring efforts of the management, and will in a few days, if no other back-set happens, be sufficiently reduced to give us an insight into the ore developments on the 2000 level of that mine.

"Alta has an increase of water, caused by the stoppage of the Justice pumps. In the Overman, Belcher, Crown Point, and Yellow Jacket, preparations are being steadily advanced, cross-cutting and opening up deeper levels at no very distant day.

"The great heat engendered in the mines by the extreme hot weather of the past few days has very materially affected the progress of work on the lower levels; and especially that of repairs to the Consolidated shaft, the hot air after being forced into the mines appearing to lose all its vital qualities, and, when breathed by the suffocating miners, to afford no sustenance."

NOTES.

The Successor to M. Leverrier, as director of the Paris Observatory, has at last been appointed in the person of Capt. Mouchez. His functions are, however, purely administrative, the scientific direction being intrusted to M. Tisserand, an astronomer of great promise, formerly attached to the Toulouse Observatory.—*Engl. Mech.*

Action of Light on Selenium.—As the result of certain experiments on the influence of various-colored lights on the electrical conductivity of selenium, M. Forssman comes to the conclusion that it is not the light vibrations which produce the changes in electrical resistance, but vibrations of another order, hitherto unknown, and which have neither a lighting, heating, nor chemical effect.—*Teleg. Jour.*

Allotropic Lead.—Schützenberger has continued his researches on the deposition of metals by electrolysis, and affirms that, in addition to copper, other metals, and notably lead, will assume an allotropic state under those conditions. He describes, for example, a voluminous gray sponge, obtained in his experimental trials, which spontaneously oxidizes in the air on exposure to a yellow crystalline oxide.

Concrete Bridges.—It would seem that a thoroughly well-constructed arch of concrete may be made absolutely stronger than a similar one of brick. This has, in fact, been proved in the case of a structure spanning an open cutting in one of the London railways. It is a flat arch of seventy-five feet span, and seven feet six inches rise in the center, where the concrete is three and one half feet in thickness, increasing toward the haunches, which abut upon the concrete skewbacks. The material of which the bridge is made is formed of gravel and Portland cement, blended in the proportions of six to one, carefully laid in mass upon close boarding set upon the centering and inclosed at the sides.

Jablochkoff Candles.—At the Paris *fête* of June 30th, the part played by electricity was smaller than anticipated. The number of electric lamps was large, but the effect not, *Nature* thinks, particularly good. The Jablochkoff candles, although superior to gas-lamps, were not sufficient to overcome all the mass of light which surrounded them. A large number of Bunsen elements had been put into requisition, but the regulators were wanting in regularity, and much of the effect was consequently lost. Competent persons say that the result would not have been so poor if previous successes had not raised too ambitious expectations in the public, and too much confidence in the operator. —*Engineer.*

Minerals from Coosa County, Alabama.—Dr. Eugene A. Smith, the State Geologist, has recently received from Coosa County, Alabama, about fifty ounces of tantalite, the discovery of which, in that locality, was announced some time since. The tantalite is all in rolled or worn specimens, the largest piece weighing 1¼ lbs. or 20 oz.; several pieces weigh two and three ounces. Most of it is in small pieces, averaging perhaps ½ oz. in weight. In one piece, crystalline faces are plainly observed. From the same locality have been received also some small crystals of zircon, nearly transparent, 6mm in length by 3mm in diameter. They are well crystallized, showing the following faces: The prism *I* (∞P) and pyramid 1 (P) predominate, combined with the prism *ii* ($\infty P \infty$), the pyramids 3 ($3P$) and 1 *i* ($P\infty$), and a double pyramid, 33 ($3P3$), probably.—*Polytechnic Review.*

Telegraphic Notes.—From home and foreign telegraphic exchanges we glean the following: The watch telephone is the latest novelty. It is about the size and shape of the old-fashioned turnip watch, and can easily be carried in the pocket. The bar magnet is curled round itself, and the coil is fixed to the central pole. Prof. Hughes announces that any microphone will act as a receiver and give out sounds if properly adjusted, and that the microphone which acts best as a transmitter will likewise be best as a receiver. The microphone, it is remarked, affords a good illustration of the fact that in science any phenomenon, however unpromising, may be turned to good account. The unmitigated nuisance of "bad contact," which was the bane of electricians, is one of the cardinal elements of the microphone.

Japan has now 125 telegraph stations, about 5000 miles of wire, and over 1000 miles of line are now in course of construction. It is proposed to hold a special exhibition of electrical apparatus in the *Palais de l'Industrie*, Paris, in 1879.

Dr. Alexander Muirhead, who has recently returned from America to England, after duplexing the Direct United States Cable, is about to start for Madras to duplex the Madras-Penang Cable. Muirhead's duplex system will also be applied shortly to the Malta-Gibraltar Cable. A cable is now being laid between Constantinople and Salonica. The Telegraph Construction ships, which have been for some time past engaged in recovering the 1866 Anglo-American Atlantic cable, have, according to the latest accounts, been so far successful that they have raised and buoyed two portions, and at the last date were only waiting for more favorable weather to put in a new piece and re-establish the interrupted communication. We may expect at any moment to hear of the success of the operation.—*Polotechnic Review.*

Dangers that Beset Submarine Cables.—Every one who has at all studied oceanic telegraphy perfectly, understands the dangers to which the shore ends of the communicating wires are exposed from the action of currents, the anchors of ships, etc. But the general idea prevailed that once the cable was laid in the gloomy depths of the ocean it was in safety. Such, however, is not the case, for the inhabitants of those regions seem to resent the intrusion. In many cases, owing to the inequalities of the bottom of the sea, the wires can not rest wholly on the bed, but in some places hang in festoons. Then they are liable to accidents from the larger denizens of the sea, among which we may particularly mention the sun-fish (*Orthagoriscus*). That peculiar but little-known animal is nearly circular, of a brilliant silvery white, and at night emits a powerful phosphorescent light, whence its name probably arose. When swimming it turns round like a wheel, and moves with great rapidity. It grows to an enormous size, often attaining four feet in diameter, and some of them are said even to reach eight feet. Specimens have been caught weighing 500 pounds. It is found in all seas from the Arctic to the Antarctic Circle. Where the tail is in ordinary fishes, this curious creature has a sort of flattening in its circular shape from which bony spines project. Not long since, an interruption occurred in a cable, and on examination it was found that it had been penetrated by one of the caudal spines of the sun-fish. Even when the wire lies quiet at the bottom, it is not safe; for a species of marine weevil attacks the gutta-percha and gradually destroys the conductivity. But the most curious instance of damage inflicted on a cable is that which lately befell the one from Portugal to Brazil. A fault having been found, the tests were applied, and the precise spot indicated. The wire was fished up and was discovered to be broken. In one of the ends was entangled a large whale. The monster was covered with parasites, and in attempting to free itself from its tormentors had broken the cable, and then managed so to twist itself in the coils of one end that it was held fast a prisoner, and not being able to rise to the surface for air, was drowned.—*Galignani's Messenger.*

A New Theory of Mill Explosions.—Manufacturers as a class are a clear-headed, intelligent, and generally well-informed set of men, who read the technical papers and profit by them, and when they meet in convention to ventilate their opinions on the subjects in which they are interested, the public expects to hear business-like, intelligent, and instructive words fall from their lips, and, generally speaking, the public is not disappointed. In this category the President of the Indiana Millers' Association most emphatically does not belong, if the following outrageous bosh credited to him by the *American Miller* was ever uttered by him. We quote:

"Novel Theory of the Minneapolis Explosion.—President Gibson, of the Indiana Millers' Association, has advanced a novel theory as to the cause of the recent disaster at Minneapolis, but it is one worthy of attention. He suggests that the explosion may have been caused by inflammable gas, produced constantly by the great fall of the large body of water used as a motive power in driving the mills. It is well known that illuminating gas can be produced by the decomposition of water, by passing it over heated iron plates. It is readily produced in large quantities in this manner. Although there are no heated plates to receive the water at the Minneapolis mills, the fall of the water is about 50 feet to a point directly under the mills to turbine wheels, whence it flows through tunnels into the river. There is enormous friction in a large body of water falling 50 feet. Friction produces heat, which may constantly produce a small quantity of combustible gas, which would rise into the mills, and under favorable circumstances produce such an explosion as destroyed the mills."

"President" Gibson's theory is, indeed, novel. It is more than that; it is so supremely ridiculous as to be beyond criticism. We can only trust that he will hasten to patent his process of making illuminating gas, and give Niagara a wide berth all his life, lest the cigar of some imprudent tourist should touch it off.

Balata, a Substitute for Gutta-Percha.—From a contribution of

Dr. W. RIEGLER in the *Wochenschrift des niederoesterreichischen Gewerbe-Vereines*, we glean the following facts relating to this new article of commerce, which bids fair to become of great importance, in view of the constantly increasing demand for elastic gums, and the rapid destruction of the trees which furnish rubber and gutta-percha. Balata, which has only been known for a short time, is inferior in the extent of its uses to caoutchouc, but surpasses gutta-percha, and is said to have already become an important article of commerce. It is the milky sap of the bully-tree, that flourishes on the banks of the Orinoco and the Amazon in South America. The operation of winning the gum is similar in every respect to that employed with caoutchouc and gutta-percha, and need not therefore be described.

It resembles gutta-percha so closely in its general properties that much of it is shipped from Guiana and sold yearly for gutta-percha—although it has many points of superiority. It is tasteless, gives an agreeable odor on being warmed, may be cut like gutta-percha, is tough and leathery, is remarkably flexible, and far more elastic than gutta-percha. It becomes soft, and may be joined piece to piece, like gutta-percha, at about 120° Fahr., but requires 270° Fahr. before melting (higher than gutta-percha).

It is completely soluble in benzole and carbon di-sulphide in the cold. Turpentine dissolves it with the application of heat, while it is only partially soluble in anhydrous alcohol and ether.

It becomes strongly electrified by friction, and is a better insulator of heat and electricity than gutta-percha, on which account it may find considerable application for electrical and telegraphic uses.

Caustic alkalies and concentrated hydrochloric acid do not attack it; but concentrated sulphuric and nitric acids attack it as they do gutta-percha, which it closely resembles in all other properties.

We have in balata, says Dr. RIEGLER, a body characterized not so much by the possession of new properties, but rather a new member of the group of useful elastic gums, taking rank between caoutchouc and gutta-percha, which may, under many circumstances, be found to be more valuable than either; and it is a matter of congratulation that the world has been supplied with another and abundant source of elastic gum to swell the supply which the rapid destruction of these trees threatened to seriously diminish.—*Polytechnic Review.*

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STATISTICS OF COAL PRODUCTION.

This is the only Report published that gives full and accurate returns of the production of our Anthracite mines.

Comparative statement for the week ending July 27th, and years from January 1st:

TONS OF 2240 LBS.	1878. Week.	1878. Year.	1877. Week.	1877. Year.
Wyoming Region.				
D. & H. Canal Co..	46,538	1,072,885	43,760	1,281,866
D. L. & W. RR. Co.	52,683	1,070,631	19,062	1,300,557
Penn. Coal Co.....	21,128	421,243	25,599	626,120
L. V. RR. Co.....	13,888	434,637	13,546	579,069
P. & N. Y. RR. Co..	791	15,964	*.....	32,624
C. RR. of N. J.....	30,801	479,065	*.....	831,777
Penn. Canal Co....	16,948	153,609	11,013	216,490
	182,777	3,648,034	112,980	4,865,503
Lehigh Region.				
L. V. RR. Co.....	43,693	1,282,306	47,903	1,682,294
C. RR. of N. J.....	41,403	678,140	*.....	842,049
D. H. & W. B. RR..	906	15,630	274	8,850
	86,002	1,976,076	48,177	2,533,193
Schuylkill Region.				
P. & R. RR. Co.....	184,976	2,476,255	129,710	3,374,778
Shamokin & Lykens Val.....	15,267	380,065	2,939	350,959
	200,243	2,856,320	132,649	3,725,737
Sullivan Region.				
Sul. & Erie RR. Co.	896	18,007	*.....	5,650
Total	469,918	8,498,437	293,806	11,133,083
Increase.....	.....	.....	.....	.....
Decrease	.....	.....	.....	.....

* These reports were not received.

The above table does not include the amount of coal consumed and sold at the mines, which is about five per cent of the whole production.

Receipts and shipments of coal at Chicago Ill., for the week ending July 27th, and year from January 1st.

	Week. Tons.	Year. Tons.
Receipts	25,001	862,550
Shipments	5,198	114,949

Belvidere Delaware Railroad Report for week ending July 27th:

	Week.	Year. 1878.	Year. 1877.
Coal for shipment at Coal Port (Trenton)	92	2,529	12,246
Coal for shipment at South Amboy	7,593	280,185	361,868
Coal for distribution	3,891	94,148	97,265
Coal for Company's use	1,576	45,846	41,316

Receipts of Coal at Boston, for the week ending July 26th and year from January 1st:

TONS OF 2240 LBS.	1878. Week.	1878. Year.	1877. Week.	1877. Year.
From Alexandria and Georgetown	6,192	39,961	476	40,104
Philadelphia	25,314	333,337	15,130	336,929
Baltimore	4,408	87,552	5,586	77,271
Other places	9,493	137,354	3,583	161,987
Great Britain	52	14,319	104	1,353
Nova Scotia	1,199	8,291	2,192	11,871
Total	46,658	620,814	27,071	629,515

Perth Amboy Business:

	Tons.
Received for the week	13,657
Shipped for the week	12,904
On hand July 27th	41,438

The increase of shipments of Cumberland Coal over the Cumberland Branch, and Cumberland and Pennsylvania Railroads amounts to 62,327 tons as compared with the corresponding period in 1877.

THE COAL TRADE OF CAPE BRETON.

The following is a statement of the coal exported during the quarter ended June 30th, 1878, from the port of Sydney, N. S.:

	Tons.	Value.
To Newfoundland	5,733	$10,412
To Cuba	3,069	6,766
To St. Pierre	78	117
To United States	25,441	46,777
Total exports of coal	34,321	$64,072

The Production of Bituminous Coal for the week ending July 27th, was as follows:

Tons of 2000 lbs., unless otherwise designated.

	Week. Tons.	Year. Tons.
Cumberland Region, Md.		
Tons of 2,240 lb	42,305	804,169
Barclay Region, Pa.		
Barclay R. R., tons of 2,240 lbs	5,643	171,205
Broad Top Region, Pa.		
Huntingdon and Broad Top R. R.	3,059	78,675
*East Broad Top	834	35,463
Clearfield Region, Pa.		
*Snow Shoe	303	14,032
*Tyrone and Clearfield	31,591	697,316
Allegheny Region, Pa.		
*Pennsylvania R. R	4,304	115,844
Pittsburgh Region, Pa.		
*West Penn R. R	2,770	107,125
*Southwest Penn. R. R	706	14,756
*Penn & Westmoreland gas coal, Pa. R. R	9,532	389,151
*Pennsylvania R. R	4,420	238,536

*For the week ending July 28.

The Production of Coke for the week ending July 28th:

Tons of 2000 lbs.	Week.	Year.
West Penn R. R	1,873	47,935
Southwest Penn. R. R	14,167	443,191
Penn. & Westmoreland Region, Pa. R. R.	1,559	39,485
Pittsburg, Penn. R. R	2,004	54,933
Total	19,603	585,544

COAL TRADE REVIEW.

NEW YORK, Friday Evening, Aug. 2, 1878.

Anthracite.

July closed without the stimulant of an advanced price list, and was very quiet. There has been, however, a little more inquiry the past few days. It is but natural to look for this as we steadily approach the time for the closing of navigation. Again the very low rates of coastwise freights should induce buyers to come into the market, for it is certain that they will be higher as the season advances, and it is not certain that coal will be lower, while it is very probable that it will be higher.

On Wednesday the Delaware, Lackawanna, and Western R. R. Co. sold at public auction, 50,000 tons of coal, as follows, comparison being made with the previous sale:

Tons.		Average prices, July 31.	Average prices, June 26.
.....	Steamer	.....	$3.47½
15,000	Broken	$3.48	3.48¼
15,000	Egg	3.59	3.58⅛
15,000	Stove	3.90	3.89
5,000	Chestnut	3.22½	3.25
50,000		$3.59	$3.59

At the last sale there was no steamer coal offered, but buyers of broken were privileged to take steamer instead. The average of the three last sales has been $3.59 per ton. Since May there has been an advance in the average prices received of from 3 to 5½c. on steamer and broken, 3c. on egg, and 5c. on stove, and a decline of 2½c. on chestnut. The grand average has been held down to $3.59 by offering larger quantities of the lower-priced coals. It was clearly evident at the last sale that there were those who were determined that prices should register at least as high as at the previous sale.

The past week has shown slight symptoms of labor troubles, but at the present time there do not appear to be grounds for any serious fears.

Coastwise freights continue to be very low, and should attract the attention of shippers, for there can hardly be a lack of trade so great that the rates will not advance.

Owing to the railroad strikes last year, our report of production was incomplete, making it impossible for us to make a comparison with this year's production.

We received, late this evening, the following dispatch from a reliable source in Philadelphia: "Extra draw-back of thirty-five cents to New York harbor to take place next Monday." This refers to an action on the part of the Philadelphia and Reading R. R. Co., and is to us incomprehensible when taken in connection with the reports of the ready market this company has had for its coal. We received our information too late to give the subject investigation, but it clearly indicates that there is a "screw loose" somewhere.

Bituminous.

The more energetic producers of bituminous coal are doing a fair business, but prices appear to be getting steadily worse. This class of coal suffers alike with anthracite from the great dullness in all branches of manufacturing. The shipments from the Cumberland and Clearfield districts are showing an improvement. At Georgetown, freights are very high, compared with other ports, and there is a great scarcity of vessels.

New York.

Wholesale Prices of Anthracite Coal for August Delivery f. o. b. at Tide Water Shipping Ports, per ton of 2240 lbs.

	Lump.	Steamer.	Grate.	Egg.	Stove.	Chestnut.
WYOMING COAL.	$	$	$	$	$	$
Lackawana, at Weehawken	3 60	3 60	3 60	3 75	4 20	3 60
*Pittston, at Newburg	3 45	3 45	3 45	3 60	4 05	3 50
L. Val. Coal Co., at Amboy	.....	3 75	3 50	3 60	4 10	3 50
Kingston at Hoboken	3 50	3 50	3 60	3 75	4 20	3 50
Old Co.'s at Port Johnson	4 40	.....	4 05	4 05	4 20	3 60
Lehigh Coal Exchange	4 10	.....	3 90	3 90	4 10	3 50
Wilkes-Barre at Pt. Johnson	3 60	3 60	3 60	3 75	4 20	3 60
Plymouth Red Ash at Port Johnson	.....	.....	3 60	3 75	4 30	3 70
Swoyers at Eliz. Pt. or S.A.	3 75	3 75	3 60	3 75	4 20	3 60
LEHIGH COAL.						
L. V. Coal Co., at P. Amboy	4 10	.....	3 90	3 90	4 10	3 50
Cross Creek, at Port John	4 00	3 90	3 90	3 90	4 20	3 60
Buck Mount. Vein at Elizabeth Port o S. A	4 25	4 00	3 90	4 10	4 25	3 60
SCHUYLKILL COAL						
At Pt. Richmond, Phila.						
Hard White Ash	3 30	3 30	3 30	3 45	3 85	3 35
Free-burning W. Ash	.....	.....	3 25	3 40	3 85	3 25
Schuylkill Red Ash	.....	.....	.....	3 70	3 85	3 25
Lorberry	.....	.....	3 70	3 85	3 85	3 35
Lykens Valley Vein	.....	.....	3 70	3 95	3 95	3 55
†*Alongside in N.Y. Harbor.*						
Hard White Ash	4 10	4 10	4 10	4 10	4 40	3 80
Free-burning W. Ash	.....	.....	3 80	3 95	4 40	3 80
Schuylkill Red Ash	.....	.....	.....	4 35	4 50	3 90
Lorberry	.....	.....	.....	4 60	4 60	4 25
Lykens Valley Vein	.....	.....	4 60	4 70	4 70	4 35

* Fifty cents per ton additional for delivery in New York.

† On coal delivered f. o. b. at the Philadelphia and Reading Coal and Iron Co.'s Wharf at Williamsburgh, the current date of harbor freight will be allowed from the prices here given.

Wholesale Prices of Bituminous Coal.

DOMESTIC GAS COALS.

Per ton of 2240 lb.	At the Shipping Ports.	Along side in New York.
Westmoreland and Penn	$4 25	.....
At Greenwich, Philadelphia	.....	$5 50
At S. Amboy	5 00	5 50
Kanawha at Richmond	4 10	5 40
Red Bank Cannel, Pa., at Philadelphia	8 00	8 50
Youghiogheny, Waverly Co., at Balt	4 00	5 65
Despard, West Va	4 50	6 00
Murphy Run, West Va., at Baltimore	3 75	5 85
Fairmount, West Va., " "	3 75	5 70
Newburg Orrel. Md. " "	3 75	6 00
Cannelton Cannel, West Va	.....	10 00
" Splint " at Richmond	6 00	7 00
" Gas Coal at Richmond	4 00	5 65
Peytona Cannel, W. Va., at Richmond	.....	10 00

MANUFACTURING AND STEAM COALS.

Cumberland at Georgetown and Alexandria	2 75@2 90	4 35@4 50
Cumberland, at Baltimore	2 90@3 00	4 35@4 50
Cl'rfi'd "Eureka" and "Franklin."		
At mines	0 75	.....
At Baltimore	3 25	4 50
At Philadelphia	3 25	4 50

FOREIGN GAS COALS.

	Sterling.	Am. cur'ncy
Newcastle, at Newcastle-on Tyne	7s.6d.	$2 50@ $3 50
Liv. House Orrel, at Liv.	25s.	13 00
Ince Hall Cannel "	35s.6d.	18 00
" Gas Cannel "	25s.6d.	10 00@ 10 50
Scotch Gas Cannel, at Glasgow, nominal	25s.	7 50
	Gold.	
Bl'k House, at Cow Bay, N.S.	$1 75	$4 50
Caledonia, at Pt. Caledonia	1 50	4 25
Glace Bay at Glace Bay	1 50	4 00
Lingan, at Lingan Bay	1 50	.....
Intern'l Mines, at Sydney	1 75	4 50
Pictou, Vale Mines, at Pictou	2 00	4 70

Retail Prices.

Per ton of 2000 lbs.

Anthracite.

	G. & Egg.	Stove	Chest
Pittston coal delivered	$5 00	$5 00	$5 00
Lack. coal, delivered below 59th St.	4 50	4 75	4 50

Bituminous.

Liv. House Orrel	$18 00	American Orrel	$11 00
Liv. House Cannel	18 00	Red Bank Cannel	7 00
Am. "	11 00	Cumberland	9 00
Ca'n'l't'n Bl'k, or splint	10 00		

Baltimore. July 30, 1878.

[Specially reported.]

Wholesale Prices per ton of 2240 lbs.

In cars at Depot N. C. R. R.

HARD WHITE ASH, FREE-BURNING WHITE ASH, SHAMOKIN, ETC.

Lump and Steamboat	$3.85	Stove	$4.25
Broken	3.85	Chestnut	3.80
Egg	4.00		

LYKENS VALLEY RED ASH.

Broken	$4.15	Stove	$4.45
Egg	4.30	Chestnut	3.90

From wharf or yard to the trade, 50c. per ton additional.

Afloat by cargo per canal barge, 15c. per ton less than in cars at depot.

Boston. July 03, 1878.

We quote Boston wholesale prices as follows:

Anthracite, broken	$4.45	Caledonia	$4.00
" egg	4.50	Newcastle	4.00
" stove	4.80	Cannel, English	18.00
Franklin	5.75	" Library	15.00
Cumberland	4.50	" Buckeye	11.00
Clearfield	4 50	Penn	6.25
Westmoreland	6.25	Youghiogheny	6.25

—*Commercial Bulletin*

Buffalo. August 1, 1878.

[Specially reported by E. L. HEDSTROM.]

Until further notice, the following will be the prices for Scranton, Wyoming, Lehigh, and Blossburg coals, per ton of 2000 pounds, delivered free on board vessels at Buffalo N. Y.:

	Lump.	Grate.	Egg.	Stove.	Nut.
Scranton	....	$4.30	$4.40	$4.65	$4.15
Wyoming	....	4.30	4.40	4.65	4.15
Lehigh (Sugar Loaf)	....	....	....	....	....

Blossburg, $3.75, F. O. B.

[Specially reported by C. M. UNDERHILL.]

The Scranton, Wilkes-Barre, Plymouth, Shamokin, and Delaware and Hudson (Lackawanna) coals are offered for the present at the following prices per ton of 2000 lbs.:

	Delivered at			
	Elmira.	Ithaca.	Syracuse	Rochester.
	Afloat.	Afloat.	Afloat.	Afloat.
Lump	.....	.....	.....	.....
Grate	$3.50	$3.35	$3.35	$3.60
Egg	3.60	3.45	3.45	3.70
Stove	3.70	3.70	3.70	3.95
Nut	3.60	3.60	3.35	3.60

	Delivered at				
	Oswego.	Erie.	Buffalo.		
	F. O. B.	F. O. B.	Afloat.	F. O. B.	Ret. Del.
Lump	.....	.....	.....	.....	.....
Grate	$3.80	$4.30	$3.90	$4.30	$4.90
Egg	3.90	4.40	4.00	4.40	5.00
Stove	4.15	4.65	4.25	4.65	5.25
Nut	3.65	4.15	3.75	4.15	4.75

Cost of coal from Erie, Oswego, Sodus Point or Charlotte for Western market, same as if shipped from Buffalo.

[Specially reported by LEE & LOOMIS.]

Per ton of 2,000 lb. delivered on cars.

	Lump.	Run of Mine.	Nut.	Slack.
Connellsville coke	$4.75	.....	.....	.....
Brookfield Coal	3.65	.....	.....	.....
Briar Hill	3.65	.....	2.85	.....
" "	3.25	.....	.....	.....
Youghiogheny	4.00	.....	.....	.....
Monterey	.....	.....	.....	.....
Catfish	3.10	2.70	.....	.....
Stoneboro	.....	.....	2.50	1.80
Sterling Cannel	4.50	.....	.....	.....
Cameron	.....	3.00	.....	.....
Hillside	.....	.....	.....	1.80

Chicago, Ill. July 29, 1878.

[Specially reported by Messrs. RENO & LITTLE.]

The following are the present prices of coal per ton of 2000 lbs. delivered:

Retail prices of coal delivered per ton of 2000 lbs

Lackawanna Stove	$6.25	Erie and Brier Hill	$5.00
" Chestnut	6.00	Wilm'gton & Ill.	$3 00@3.50
" Grate	6.00	Blossburg	5.50@6.00
" Egg	6.00	Piedmont	7.00

Stocks of all kinds of coal liberal. Trade dull.

Cincinnati, O. July 31, 1878.

[Specially reported by the Consolidated Coal & Mining Co.]

Per bushel of 72 lbs.

	Retail delivered.	Wholesale afloat.
Youghiogheny	11c.	7¼c.
Camden	9c.	5½c
Cannel	17@18c.	13c.

Anthracite, delivered, $7@$8 per ton of 2,000 lbs.

Cleveland, O. July 31, 1878.

[Specially reported by F. A. BATES, Esq.]

Per ton of 2000 lbs. f.o.b. vessels.

WHOLESALE.

Brier Hill (Church Hill)	$3.25
" " No. 2 Grades	3 00@3.15
Monday Creek	2.60
Straitsville Lower Vein	2.60
Hocking Valley	2.60
Massillon (No. 2 grades 15 cents less)	2.60
Tuscarawas Valley	2.25
Columbiana	2.25
Nut coal, various grades	1.70@2.00
Screenings " "	1.25@1.50
Youghiogheny gas coals	3 60

RETAIL TRADE.

	1 ton.	10 tons.
Brier Hill lump	$4 00	3 75
Massillon and Mineral Ridge lump	3 75	3 50
" " " " nut	3 50	3 25
Straitsville Lower Vein and Hocking lump.	3 60	3 35
" " " " nut	3 40	3 15
Rich Hill lump	3 50	3 35
" " nut	3 25	3 00
Columbiana, lump	3 00	2 75
" nut	2 50	2 35
Lacka'a., Wilkes-Barre and Pittston egg and grate	5 50	5 25
Lackawanna, Wilkes-Barre and Pittston stove	5 85	5 60
" " " chestnut	5 25	5 00

Lehigh $1 per ton higher.

Hamilton, Ont. July 31, 1878.

[Specially reported by H. BARNARD.]

Retail prices delivered per ton of 2000 lbs.

Scr. or Wilkes-B. Grate	$4.75	Lehigh Lump	$6.00
" " Egg	4.75	Brier Hill	5.00
" " Stove	5.25	Massillon	4.50
" " Nut	4.75	Smithing	5.50

Milwaukee, Wis. July 31, 1878.

[Specially reported by Messrs. R. P. ELMORE & Co.]

Retail price per ton of 2000 lbs.

Anthracite, Egg, and Chestnut	$5 50		
Stove size	6 50		
Lehigh lump	$6 50	Connellsville coke on	
Brier Hill	5 00	R. R. track	7 25
		Straitsville	4 80

Montreal. July 31, 1878.

[Specially reported by Messrs. ROBERT C. ADAMS & Co.]

Wholesale per 2240 lbs.

Scotch Steam	$4.00	Cape Breton Steam	$3.25
Pictou	3.60	Newcastle Smith's	5.00

Anthracite at retail, per 2000 lbs. delivered.

Stove	$6.00	Chestnut	$5.25
Egg	5.50		

New Orleans, La. July 29, 1878.

[Specially reported by Messrs. C. A. MILTENBERGER & Co.

PITTSBURG COAL.

At wholesale (by boat-load)	28c	per bbl. of 180 lbs.
To steamboats	45c.	" "
" manufactories	45c.	" "
" families	50c.	" "
In hhds. (for shipment)	$5.00 per hhd. from 5 to 6 bbls.	

ANTHRACITE COAL.

Per ton of 2000 lbs.

At wholesale	$7.00 to $8.00
To families etc.	9 00 to 10.00

ST. BERNARD (KY.) COAL.

To steamboats	40c.	per bbl. of 180 lbs.
" families	45c.	" "
Virginia cannel to families	$1.00	" "

Philadelphia, Pa. Aug. 1, 1878.

The Schuylkill region is to start, according to programme, next week, at the risk of displeasing the editor of a paper who thinks all the wisdom of the coal trade is concentrated in the Board of Control. We are bound to record, as a fact, that the quota fixed for August, while the market is still staggering under the large quantity produced in June, is entirely too large. The consequence of thus forcing coal, which is not needed, is just the reverse of what the combination was intended to accomplish. Prices are becoming weaker, and the faith in the combination is very much shaken, although there is no occasion for it, unless, with the evidence before them, the Board of Control persists, month after month, in the unwise policy of regulating the supply according to their expectations and sanguine hopes, instead of taking things as they are. The combination does not attempt to regulate prices, and when rates weaken, they can cure them by contracting the month following. However, the object of it is to obtain better prices than would be obtained without it, by regulating the supply; therefore, while a temporary mistake can be rectified, if persisted in month after month, it would ultimately result in no combination in fact. The Schuylkill operators have certainly derived no benefit from it so far, and it remains to be seen what the company has gained by trying to make every body lose, so that they can get a big price for transporting. If no more of the wisdom of the Board of Control can be displayed, it is far better there should be no combination at all.

Freights low and unsettled while the mines are idle, and but few orders can be filled. $1.10 is the full rate to Boston now.

Pittston, Pa. July 31, 1878.

Pennsylvania Coal Company's Coal in Yard.

Retail per ton of 2,000 lb.

Lump, Egg, and Stove	$2 25
Chestnut	2 00
Pea	1 00

Delivered, 50 cents per ton additional.

Richmond, Va. July 27, 1878.

[Specially reported by S. H. HAWES, Dealer in Coal.]

Per ton of 2240 lbs. f.o.b.

Kanawha Cannel	$9.00	New River Bituminous	$3.30
Coalburg Splint	4.50	Clover Hill Coal	2.50
Lewiston "	4.50	Norwood Gas and	
Kanawha Gas Coal	4.10	Steam Coal	2.70

Sandusky, Ohio. July 31, 1878.

[Specially reported by Messrs. BLACK & CLARKE, Agents Con. Coal and Mining Company.]

Per ton of 2000 lbs.

ANTHRACITE.

	Grate.	Egg.	Stove.	Chest
Lehigh	$6 00	$6 00	$6 25	$5 75
Wilkes-Barre	4 80	4 90	5 15	4 65
Pittston	4 80	4 90	5 15	4 65

BITUMINOUS.

Massillon	$2 85	Straitsville	$2 50
Hocking Valley	2 50	Piedmont	4 10

Prices retailed delivered 50c.@75c. above car prices.

San Francisco, Cal. July 25, 1878.

COAL.—Imports from January 1st to July 1st, 1878:

	Tons.		Tons.
Anthracite	5,765	Seattle	44,351
Australian	46,610	English	15,897
Coos Bay	16,410	Mt. Diablo	15,897
Cumberland	802	Rocky Mountain	371
Bellingham Bay	2,620	Ione	601
Vancouver Island	68,113	Carbondale	1,734

Stocks of all kinds continue large and free, causing low prices to prevail. The last offer coming to our knowledge was $5.75 for a cargo of Welch Hartley (not yet shipped), which offer was refused. Arrivals during the week embrace the following: Per Enoch Talbot, 1866 tons Seattle; Harvest Home, 1000 tons same; Belvidere, 2050 tons Nanaimo; Penang, 900 tons Wellington, etc. We have now to note the sale of the Bremen's cargo of, say, 2676 tons English Welch Hartley, private—say $5.25@$5.37½. As before stated by us, cargo sales to arrive of Australian and English steam have been concluded as low as $5.75@$6. California (Mt. Diablo) sells at $4.50 for fine, and $5@$5.50 for coarse; Seattle, Coos Bay, etc., $5.50@$6 in cargo lots, while British Columbia coals may be quoted at $6@$7. At the close we note a spot sale of one cargo of Wallsend at $5.87½; also a cargo of same, to arrive (nearly due), at something over $6. Ship War Hawk, from Seattle, brings 1464 tons; the Nor. bark Johan Irgens brings 1150 tons Wellington.—*Commercial Herald.*

St. Louis, Mo. July 31, 1878.

Reported by JAMES J. SYLVESTER, Secretary of the Anthracite Coal Association.]

Retail prices, delivered. Ton of 2000 lbs.

ANTHRACITE.

	Per ton.		Per ton.
Lackawanna	$7.50@.....	Lehigh	$8.50@.....
Wilkes-Barre	7.50@.....	Connells. Coke.	6.00@.....
Schuylkill	7.50@.....	Blossburg	7.75@.....

July 31, 1878.

[Specially reported by Messrs. LEWIS P. HARVEY & Co.]

BITUMINOUS.

Big Muddy	$3.65	Piedmont	$7.25
Indiana Block.	3.25	Pittsburg	4.35
Illinois Coals	2.25@2.50	Peytona	7.50
Blossburg	7.75	Lehigh Val. Ant.	7.50@8.00

Toledo, Ohio. July 31, 1878.

[Specially reported by Messrs. GOSLINE & BARBOUR.]

We quote the following prices for coal on cars at Toledo:

Ton of 2000 lbs.

	Grate.	Egg.	Chestnut.	Stove
Pittston	$4 80	$4 90	$4 65	$5 15
Wilkes-Barre	4 80	4 90	4 65	5 15
Lackawanna	4 80	4 90	4 65	5 15

Lehigh lump, $5.75.

Ton of 2000 lbs.

Straitsville lump	$2 60	Massillon nut	$2 40
" nut	2 25	Willow Bank lump	2 85
Shawnee lump	2 60	" nut	2 40
" nut	2 25	Cumberland	5 00
Hocking Valley lump.	2 60	Blossburg	4 60
" nut	2 25	Morris Run	4 60
Massillon lump	2 85	Gas Coal	3 30

Retail prices, delivered in the city, are: Stove, $5.25; Grate, Egg, and Chestnut, $5.

FREIGHTS.

Coastwise Freights.

Per ton of 2240 lbs.
Representing the latest actual charters to August 1, 1878

PORTS.	From Philadelphia.	From Baltimore.	From Elizabethport, Port Johnson, South Amboy, Hoboken and Weehawken.
Alexandria, Va.	50	.....	.....
Bangor, Me.	1.05	.....	.....
Bath, Me.	1.10	1.25	75
Baltimore	.....	.....	.....
Belfast	.....	.....	.....
Beverly, Mass.	.....	.....	80
Boston, Mass.	1.10@1.15	1.25@1.30	70
Bridgeport, Conn.	.....	1.25	50
Bristol, R. I.	.....	.....	70
Brooklyn	.....	.....	.....
Cambridge, Mass.	1.10§	.....	70
Charleston	90	.....	.....
Charlestown	.....	.....	.....
Danversport	.....	.....	.....
East Cambridge	1.30	.....	.....
Fall River	.....	1.25	65
Georgetown, D.C.	.....	.....	.....
Hartford	.....	.....	.....
Hingham	1.25†	.....	.....
Hoboken	.....	.....	35
Hudson	.....	.....	.....
Jersey City	.....	.....	35
Lynn	1.15	.....	.....
Middletown	.....	.....	90
Nantucket, Mass.	.....	.....	90
New Bedford	.....	1.25	70
Newburyport	1.15	1.40	90
New Haven	.....	1.25	50
New London	.....	1.25	60
Newport	.....	.....	65
New York	80@85	1.20	35
Norfolk, Va.	40	.....	.....
Norwich	1.05	.....	60
Norwalk, Conn	.....	.....	55
Pawtucket	1.12‡	.....	.....
Philadelphia	.....	.....	.....
Plymouth	.....	.....	.....
Portland	90†	1.25	75
Portsmouth, N.H.	1.15@1.20	1.40	80
Portsmouth, Va.	45	.....	.....
Providence	1.00@1.05	1.25	65
Provincetown	.....	.....	.....
Quincy Point	1.12@1.22½	.....	.....
Richmond, Va	50@75	.....	.....
Rockland	.....	.....	.....
Saco	.....	.....	.....
Salem, Mass.	1.25	1.25	75
Salisbury	1.30	.....	.....
Saugus	.....	.....	.....
Saybrook	1.05	.....	.....
Savannah	.....	.....	.....
Somerset	1.00@1.07	.....	.....
St. Johns, N. F.	.....	.....	.....
Washington	50@55	.....	.....
Weymouth	1.00	.....	.....
Williamsburg	85@60†	.....	.....

*And discharging and towing. † And discharging. ‡ And towing. § 3c. per bridge extra.

Rates of Freight on Anthracite Coal to Tide-Water Ports.

SCHUYLKILL COALS. Per ton of 2,240 lb.	From * Pine Grove.	From * Tamaqua.	From * Schuylkill Haven.	From Port Clinton.
To *Port Richmond*, via P. & R. R. R., Main Line, for shipment	1.95	1.90	1.75	.....
To *Harrisburg*, via Lebanon Valley Branch	1.29	1.85	1.70	.....
To *Allentown*, via East Pennsylvania Branch	1.59	1.74	1.59	.....
To *Lancaster*, and Points on Lancaster Branch, via R. & C. R. R.	1.71	1.66	1.51	.....
To *Dauphin*, via Schuylkill and Susquehanna Branch	1.09	1.52	1.37	.....
To *Slatedale Junction*, via Berks and Lehigh ranch	1.74	1.69	1.54	.....
To *Lebanon*, via Lebanon and Tremont Branch	98	.....	.....	.....
To *Philadelphia*, via Schuylkill Canal, including freight and charges for the use of cars and barges, and for tolls (exclusive of cost of loading, trimming and unloading)	.....	.....	1.65	1.55
To *New York*, via Schuylkill Canal, including freight and charges for the use of cars and barges and tolls on the Schuylkill Canal and Delaware & Raritan Canal and the towing between Fairmount and Bordentown and between New Brunswick and New York (exclusive of cost of loading, trimming and unloading)	.....	.....	2.50	2.40

From *Tamanend*† to *Catawissa*, *McAuley*, *Mainville*, *Rupert* and *Danville*, via Catawissa & Williamsport Branch Railroad 100
From *Tamanend*† to *Williamsport*, *Hall's* and *Montoursville*, via Catawissa & Williamsport Branch Railroad 135

*For shipment via Main Road or Schuylkill Canal, one and one-half cents per ton per mile, and two cents per ton additional to Schuylkill Haven, Pine Grove, Tamaqua or Port Clinton, for Canal, as the case may be. Provided no charge shall be less that 15 cents, or greater than 45 cents per ton

† Coal sent to points on the Catawissa and Williamsport branch will be charged one and one half cents per ton per mile, and two cents per ton additional to Tamanend.

A deduction of 20 per cent will be made from the above rates upon all coal consigned for actual consumption at iron works upon the line of the railroad, any of its branches, or the Schuylkill Canal.

An additional charge of 25 cents per ton will be made on chestnut and pea coal to whatever points consigned. If the shipper signs a release of all demands arising from a deficiency of weight at the place of destination, and agrees to indemnify the company from all claims by reason thereof, such additional charge will not be made. Releases, properly prepared, will be furnished, and can be signed at the coal offices of the company, at St. Clair, Palo Alto, Schuylkill Haven, Mount Carbon, Pine Grove, and Tamaqua.

For consumption at local points in coal region, including Shamokin, Herndon, Schuylkill Haven, Pine Grove, and Tamaqua, three cents per ton per mile, and two cents per ton additional; and a charge for *car service* of fifteen cents per ton when in Philadelphia and Reading Railroad cars, provided no charge, including freight tolls and car service, shall be less than twenty-five cents per ton. If the coal is for manufacturers, the rate will be two cents per ton per mile, and two cents per ton additional; and a charge for car service of five cents per ton when in Philadelphia and Reading Railroad cars. Provided no charge, including freight, tolls, and car service, shall be less than fifteen cents per ton.

Sent westward via Northern Central Railway (in N. C. R W. Co.'s cars), four and two tenths cents per ton per mile, to Locust Gap, Shamokin, or Herndon, provided no charge will be made less than fifteen cents per ton.

One mile extra will be added for coal passing through the East Mahanoy Tunnel.

Fractions of distances and rates will always be stated in *tenths*.

No charge will be made for weighing or making returns of coal shipped, and the latter will be furnished free of charge upon application to the weighmaster; if these returns are to be sent by mail, envelopes properly stamped and addressed, must be furnished to the weighmasters.

All coal will be charged the rates (both lateral and main line) current on the day it is weighed; it will also be waybilled on the same day.

Ocean Freights.

Ocean Freights on coal, iron, etc., per ton of 2000 lbs., to and from foreign and domestic ports, for four weeks, ending August 2, 1878, are given below.

DATE.	From	To	Cargo.	R'te
July 10	Philadelphia	Martinique	Coal	2.80
" 14	Philadelphia	Halifax, N. S.	Coal	1.60
" 14	Philadelphia	St. Johns, N. B.	Coal	1.25
" 14	Philadelphia	Yarmouth, N.S.	Coal	1.40
" 14	Glace Bay	Havana	Coal	3.50
" 18	New York	St. Johns, N. B.	Coal	2.60
" 22	South Amboy	St. Johns, N. B.	Coal	1.00
" 23	Perth Amboy	St. Johns, N. B.	Coal	1.00
" 27	New York	Halifax, N. S.	Coal	1.50
" 31	Philadelphia	St. Thomas	Coal	3.50
" 31	New York	Nassau	Coal	2.00

Lake Freights on Coal and Iron Ore.

Representing the latest actual charters up to July 31.

From	To	Rate per ton.	From	To	Rate per ton.
Ashtabula	Milwauk'e	30	Cleveland	Sheboygan	45
"	Chicago	40	"	Chicago	35
Bay City	Chicago*	60	"	Milwaukee	35
Black Riv.	Chicago	40	"	Brockville	$1.00
"	Milwaukee	40	"	Milwaukee	40
Buffalo	Chicago	30	Erie	Chicago	40
"	Milwaukee	80	Escanaba	Cleveland*	60
"	Portage	50	Fairport	Toronto	85
"	Cleveland*	40	"	Toledo*	60
"	Detroit	20	Marquette	Chicago	1.20
"	Saginaw	35	"	Cleveland*	1.00
Charlotte	Chicago	80	Oswego	Chicago	90
"	Milwaukee	65	"	Milwaukee	86
Cleveland	Toronto	85	"	Detroit	45

* Iron ore.

Lake freights dull and unchanged. The schooner Saco has been chartered for ten trips, to bring coal from Black River to Buffalo; terms private.

During the gale of July 26th, the schooner Portage, with a cargo of coal, sunk near Port Rouan, Ont.

Coal is arriving at Buffalo, N. Y., direct from Philadelphia by Erie Canal boats. The freight is $1.50 per gross ton (2240), with a rebate of ten cents per ton paid by the Delaware and Raritan Canal Company, which makes the sum total of $1.60 per ton from Philadelphia to Buffalo, a distance of over 600 miles by water. The boatman must pay all expenses, except unloading out of the $1.60 per ton.

IRON MARKET REVIEW.

NEW YORK, Friday Evening, Aug. 2, 1878.

American Pig.—The Thomas Iron Co. reports sales of about 400 tons of iron on the basis of $18 for No. 1 Foundry. At a meeting of foundrymen in this city, it was stated that 200 tons of No. 1 X Crane iron had been sold at $16. There is also reported a sale of 1500 tons of North River No. 1 foundry iron at $15.50. This iron was purchased by a Providence concern. In comparison with some of our previous reports, it might be said that there is a better business doing; but when we look at the prices secured, we can say that it has been done only by giving the buyer almost his own terms. Since July 1st there have gone out of blast, or are about to go out, eight furnaces. This will, of course, help matters, but it is questionable if others will not have to follow the same course, unless a better demand sets in than is now indicated. The continuation of the very quiet demand has thoroughly demoralized the iron market, and almost without exception those who have to do with the selling of iron speak more discouragingly than at any time within our experience. There is certainly not yet the first indication of a better business to follow during the balance of the year. We quote No. 1 Foundry at $16.50@$18.00; No. 2 Foundry, $15.50@$17.00; and Forge, $14.50@$16.00.

Scotch Pig.—In this class of iron there is no thing worthy of note doing. We quote Coltness at $23@$24; Eglinton, $21.50@$22, and Glengarnock, $23.

Rails.—We only learn of a few hundred tons of steel rails sold. The prices of Bessemer rails are not nearly so strong as a month or two ago, and the outlook for the balance of the year is not so encouraging, although this branch of the iron trade is better than any other. We quote steel rails at mills at $41.50@$44, according to quantity and delivery, and iron rails, $32@$36.

Old Rails.—We learn of no business in these. We quote at $17@$18.

Wrought Scrap.—There is a sale of 100 tons of No. 1 wrought scrap, delivered East, reported to have been made at a price equal to a shade under $20 here. We quote at $20@$21.

Baltimore. July 29, 1878.

[Specially reported by Messrs. R. C. HOFFMAN & Co.]

We have no change to report in the iron market. Trade continues dull and prices as follows:

Balt. Char.	$26.00@$28.00	M. & White	$13.00@$14.00
Va. "	26.00@ 28.00	C'lC.B.Blooms	50.00@ 52.00
Anth. No. 1	19.00@ 20.00	" " Billetts	52.00@ 55.00
" " 2	18.00@ 19.00	Refi'd Blooms	43.00@ 45.00
" " 3	16.00@ 17.00		

Buffalo. July 31, 1878.

[Specially reported by Messrs. PALEN & BURNS.]

	4 mos
No. 1 Foundry	$17.50
No. 2 "	16.50
Mill	15.00
Silver Gray	16.00
American Scotch A 1	18.00
" " B 1	17.00
" " No. 2	16.50

Chattanooga, Tenn. July 29, 1878.

[Specially reported by J. F. JAMES, Dealer in Iron & Metals.]

The usual dullness in every branch of the trade continues, and it is now a settled fact, and admitted by those interested, competent to judge, that we have at length reached the point from which, in the future, there will be very little deviating in prices or demand. This is not at all encouraging, but time will prove its correctness. This is undoubtedly true as to the pig-metal branch of the trade, for, should prices advance $2 per ton, there are so many idle stacks in good condition and ready to resume at a few days' notice, the supply would exceed the demand, and prices again drop to their present state. The following are current rates in car-load lots for cash:

Tenn., Ala. & Ga. Charcoal, No. 1 Foundry	$16 00@$17 00		
Tenn., Ala. & Ga. Charcoal, No. 2 Foundry	15 00@ 16 00		
Tenn., Ala. & Ga. Charcoal, Gray Forge	13 00@ 15 00		
Tenn., Ala. & Ga. Coke, No. 1 Foundry	18 00@ 19 00		
Tenn., Ala. & Ga. Coke, No. 2 Foundry	16 00@ 17 00		
Tenn., Ala. & Ga. Coke, Gray Forge	14 00@ 15 00		
Charcoal or Coke, white and mottled	13 00@		
Old rails	$18 00@$19 00	Wr'ght scrap,	
Old car wh'ls.	16 00@ 17 00	No. 2	$11 00
Wr'ght scrap,		Cast scrap	10 00
No. 1	16 00	Muck bar	30 00@ 32 00

IRON ORES.

Red hematite or fossiliferous f. o. c. at mines, about 55 per cent metallic iron	$1.25
Brown hematite about 55 per cent metallic iron	1.75

Cincinnati, O. July 29, 1878.

[Specially reported by Messrs. TRABER & AUBERY, Commission Merchants for the sale of pig iron, blooms, ore, etc.]

Below please find closing quotations of our pig-iron market, viz.:

CHARCOAL.

H'n'g Rock	No. 1 Foundry & B 1	$21 00@$22 50—4 mos.
"	No. 2 "	20 00@ 21 00—4 mos.
"	Soft Silver Gray	18 00@ 19 00—4 mos.
"	Mill	18 00@ 19 00—4 mos.
Tennessee	No. 1 Foundry	20 00@ 21 00—4 mos.
"	No. 2 "	19 00@ 20 00—4 mos.
"	Mill	18 00@ 19 00—4 mos.

STONE COAL.

Ohio	No. 1 Foundry	$17 00@ 18 00—4 mos.
"	No. 2 "	16 00@ 17 00—4 mos.
"	No. 3 "	15 00@ 16 00—4 mos.
"	No. 4 "	15 00@ .....—4 mos.
"	Mill	16 00@ 17 00—4 mos.

COKE.

Ohio & W. Va.	No. 1 Foundry	18 00@ 19 00—4 mos.
" "	No. 2 "	17 00@ .....—4 mos.
" "	Stove	16 00@ .....—4 mos.
" "	Mill	16 00@ 17 00—4 mos.

CAR-WHEEL.

H'n'g R., C. B.	Hecla, Vesuvius, Etna, Buckhorn, Jefferson.	$30 00@ 35 00—4 mos.
Maryland,	Cedar Point	35 00@ .....—4 mos
Missouri,	Maramec	28 00@ ... .—4 mos

BLOOMS.

Charcoal	$45 00@$50 00—cash.

SCRAP IRON.

Cast	40c. @ 45c.—cash.
Wrought	62½c.@ $1.00—cash

Columbus, Ohio. July 30, 1878.

[Specially reported by Messrs. King, Gilbert & Warner, Dealers in Pig Iron and Ores.]

FOUNDRY IRONS.

No. 1 Hanging Rock Charcoal	$22 00@$22 50
No. 2 " " "	.....@ .....
No. 1 Hocking Valley soft and strong from pure limestone ores	18 00@ 18 50
No. 2 Hocking Valley soft and strong from pure limestone ores	17 00@ 17 50
No. 1 American Scotch	18 00@ 18 50
No. 1 Moxahala	18 00@ 18 50
No. 2 "	17 00@ 17 50
No. 1 Shawnee	18 00@ 18 50
No. 1 Eliza (Jackson County)	18 00@ 18 50
Silver Gray	16 50@ 17 00

MILL IRONS.

Gray neutral	16 00@ 17 00
Mottled and white neutral	15 50@ 16 00
Gray cold short	16 00@ 16 50
Mottled and white cold short	15 00@ 15 50

Cleveland, O. July 31, 1878.

[Specially reported by Messrs. C. E. Bingham & Co.]

Per gross ton, on four months' time. Subject to change without notice.

FOUNDRY IRON.

No. 1 L. S. Charcoal	$24 00	Am. S., No. 1, Ch. Val	$22 00
No. 2 " "	24 00	" " B—1, " "	21 00
No. 1 Anthracite	21 00	" " No. 2 " "	19 00
No. 2 "	19 00	No. 1, Massillon	22 00
No. 1 Bituminous	21 00	B—1, "	21 00
No. 2 "	19 00	No. 2, "	20 00

CAR-WHEEL AND MALLEABLE IRON.

No. 3, L. S. Charcoal	$25 00	Nos. 5 & 6, L. S. Char.	$25 00
No 4, " "	25 00		

BESSEMER IRON.

Nos. 1 & 2, L. S. Char	$24 00

FORGE IRON.

No. 1, Gray	$18 00	White and Mottled	$17 00

Iron Ores.

Red Hematite (about 55 per cent. metallic iron) f. o. c. at mines	$1 25
Brown Hematite (about 55 per cent. metallic iron)	1 75

Louisville, Ky. July 30, 1878.

[Specially reported by Messrs. George H. Hull & Co.]

The past week has witnessed an improved demand for pig-metal, and the indications are that a large fall business will be done by iron manufacturers. A better feeling pervades the community at large, and more confidence in the speedy return of better times than has been shown for a long period.

The usual time, 4 months, allowed on quotations below:

FOUNDRY IRONS.

	No. 1.	No. 2.
Hanging Rock Charcoal	$21 00@$22 00	$18 00@$20 00
Southern Charcoal	.....@ 19 00	16 00@ 17 00
H'n'g Rock, Stc'l & Coke	19 00@ 20 00	17 00@ 18 00
Southern Stonecoal & Coke	17 00@ 19 00	16 00@ 17 00

"Amer. Scotch"... $18@$20 | Silver Gray... $15@$17.00

MILL IRONS.

No. 1 Charcoal, Cold-short & Neutral	$16 00@$17 00
No. 1 Stc'l & Coke, Cold-short & Neutral	16 00@ 16 50
No. 2 Stc'l & Coke, Cold-short & Neutral	15 50@ 16 00
No. 1 Missouri and Indiana, Red-short	20 00@ 21 00
White & Mottled, Cold-short & Neutral	13 00@ 15 00

CAR-WHEEL AND MALLEABLE IRONS.

Hanging Rock, Cold Blast	$30 00@$32 00
Alabama and Georgia, Cold Blast	25 00@ 30 00
Kentucky, Cold Blast	23 00@ 26 00

Milwaukee, Wis. July 31, 1878.

[Specially reported by Messrs. R. P. Elmore & Co.]

CHARCOAL IRON.

No. 1 Lake Superior per gross ton	$23 00—4 mos.
" 2 " " " "	22 00—4 mos.

ANTHRACITE IRON.

No. 1 Anthracite per gross ton	23 00—4 mos.
" 2 " " "	22 00—4 mos.

STONE COAL AND COKE.

Warner's Am Sc'th (Bk. Band, per ton	$24 00@	....—4 mos.
Soft Silvery per ton	21 00@	....—4 mos.
Ohio Stone Coal	22 00@	....—4 mos.

CAR WHEEL.

Lake Superior ores per ton	$24 00@25 00—4 mos

Philadelphia, Pa. August 1, 1878.

[Specially reported by Justice Cox, Jr., & Co., Iron Merchants, 333 Walnut street, Philadelphia.]

Pig Iron.—The month just past has been marked as one of the dullest for years. The extreme heat, stock-taking, etc., have curtailed the consumption of pig-iron, while the furnaces went steadily on producing, until stocks have increased, and many producers have concluded that a curtailment was their only salvation, hence we have the report that three furnaces will be put out this week on the Lehigh. This, with one last week, makes four in two weeks. If in the next two weeks we should have the cheering news of two or three more blowing out, production would be more on a par with consumption, and we would not hear from day to day of low prices for round lots; in fact, already most producers are firm at quotations. We quote No. 1, $17.50 to $19.50; No. 2, $16 to $18; Gray Forge, $15 to $17—all as to brand and delivery.

Manufactured Iron.—The demand for bars continues exceedingly light, and only small orders are pressing on the market. The contemplated stoppage of all mills in this city, on account of a reduction in wages, has been postponed until the 15th, when mill owners are to again offer a reduction; and as the men say they will not accept it, a suspension is looked for, for the balance of the month at least. Little new in tank or plate iron is coming on the market at this time. The mills are mostly filled up on old orders taken before the hot weather set in. Mills making shapes (angles, tees, etc.) are only moderately busy. We quote bars (common) 1 6-10 to 1 8-10c.; best refined, 1 9-10 to 2c. per lb.; plate and tank, 2¼ to 6c. per lb.

Rails.—The demand for steel rails continues good, with a firm market. In iron rails the demand continues to improve, with numerous small orders on the market. We quote steel, $42 to $44; iron, $32 to $35—all at mills.

Old Rails.—The stock of old rails in store and afloat makes prices rather weak. We quote $18 to $19.

Old Wheels are quoted, without sales, at $17.50 to $18.50.

Scrap.—Wrought is quoted $20 to $22; cast, $12 to $14.

Pittsburg, Pa. July 30, 1878.

[Specially reported by A. H. Childs.]

The outlook for pig-iron in this market is rather more encouraging than at date of last report. The mills are generally resuming work, and, in addition to the increased demand for immediate use, there is considerable disposition manifested to make contracts for future delivery. While no advance can be quoted, still prices are firm, and holders generally refuse to sell more than a few weeks ahead at the prices now ruling.

	4 mos.		4 mos.
No. 1 F'dry	$19.00@$20.00	M. & White	$15.00@$16.00
No. 2 "	18.00@ 19.00	Hot Blast Ch.	20.00@ 23.00
Gray Forge	16.50@ 19.00	Cold Blast W.	35.00@ 37.00

Richmond, Va. July 30, 1878.

[Specially reported by Asa Snyder, Esq.]

There is considerable inquiry to day for foundry grades of pig-iron and old rails. I quote as below, although prices are shaded for orders of 100 tons or more:

Amer. Scotch Pig Iron			$22.00@$23.00
Anthracite	" "	No. 1	19.00@ 20.00
"	" "	No. 2	18.50@ 19.00
"	" "	No. 3	17.00@ 18.00
"	"	Mottled	15.00@ 16.00
Coke	"	No. 1	19.00@ 20.00
"	"	No. 2	18.00@ 19.00
Va. Cold Blast Charcoal Pig Iron, cold short			19.00@ 22.00
" " " " "		neutral	27.00@ 29.00
" Warm " " "		cold short	18.00@ 20.00
" " " " "		mill	17 00@ 18 00
Old Rails			16.00@ 17.00
Wrought scrap No. 1			17.00@ 18.00
Cast scrap—Machinery			17.00@ .....
Richmond Refined Bar Iron			2.00@ 2.10
Horse-shoes			4.25@ 4.50
Mule-shoes			5.50@ .. ..
Old Dominion nails (standard size)			2.50 keg.

Freight by sail to New York, $1.60 for 2240 lbs.

St. Louis, Mo. July 30. 1878.

[Specially reported by Messrs. Spooner & Collins, Commission Agents for all kinds of Iron.]

There is no improvement in the demand for pig-iron since last report. Prices remain the same, with no prospect of any advance for some time to come.

COLD BLAST CHARCOAL—ALL NUMBERS.

Hanging Rock	$28@$33	Assorted Bar Iron	$1.75 rates.
Tennessee	25@ 30	No. 1 Wr'ght Scrap,	70c. cwt.
Kentucky	25@ 30	Heavy cast "	60c. "
Missouri	25@ 30	Light " "	40c. "
Georgia	25@ 30	Old rails	$19 00@$20 00
Alabama	25@ 30	Old carwheels	17 00@ 18 00

	No. 1.	No. 2.	Mill.	White and Mottl'd
Missouri stone coal	$22 00	$21 00	$19 00	$17 00
" charcoal	20 00	19 00	18 00	16 00
Tennessee charcoal	20 50	19 00	17 50	16 00
Tenn. coke very soft and strong	20 00	19 00	17 00	15 00
Hanging Rock charcoal	24 00	23 00	21 00	20 00
" " cold short	23 00	21 00	20 00	.....
	ExNo.1	No. 1.	BNo.1.	No. 2.
Alice Hanging Rock coke.	$23 00	$22 00	$21 00	$19 00
Moxahala Black Band ores	23 00	22 00	21 00	19 00

METALS.

New York, Friday Evening, Aug. 2, 1878.

An examination of our reports on the several articles quoted below would indicate that a better business had set in; but a closer knowledge of the facts leads us to suppose that the movement is largely speculative, and is not a healthy one. There is now, as there has been ever since 1873, a class of men who are misled by their hopes into anticipating business which never comes. A change for the better must come some day, but there was never a time when the indications for an active fall trade were less encouraging than now.

RECEIPTS OF METALS AT NEW YORK FOR THE FOUR WEEKS ENDING AUGUST 1ST, AND YEAR FROM JANUARY 1ST, 1878.

	July 11	July 18.	July 25	Aug. 1.	Year from Jan. 1
Copper, bbls	1,384	818	820	626	13,261
Copper, boxes	....	.....	.....	.....	113
Copper, cakes	917	183	11	659	10,198
Lead, pigs	14,575	4,141	6,575	6,423	196,934
Spelter, pieces	672	759	1,000	769	29,300
Quicksil'r, flasks	....	.....	100	.....	783

Gold Coin.—During the week under review the price of gold has been steady at 100⅛.

Bullion.—The market was steady the early portion of the week, but weakened yesterday, without recovering up to the close of business to-day. We quote in this city at 114⅛; in London, 52 5/16d.; in San Francisco, 11 per cent discount.

BULLION SHIPMENTS.

We note the following shipments of bullion from the various producing mines in addition to the announcements in our last issue:

July 15.	Star,	Nevada	$9,694.00
" 17.	Hillside,	"	11,639.80
" 23.	Leopard	"	5,900.00
" 25.	Gold Hill,	"	8,660.00
" 19.	Tybo cons.,	"	9,338.31
" 18.	Alexander,	"	3,799.13
" 19.	Manhattan,	"	23,700.00
" 15.	Indian Queen,	"	3,558.83
" 22.	Independence,	"	10,000.00
" 22.	Northern Belle,	"	12,695.20
" 14.	Raymond & Ely	"	3,999.42
" 23.	Phœnix,	California	3,734.62
" 23.	Christy,	Utah	10,430.00
" 26.	Silver State	Idaho	6,404.02

The Value of Mexican and Trade Dollars as Bullion.—The following notice has recently been issued from the office of the Director of the Mint at Washington, D. C.:

In consequence of the number of inquiries received relative to the value of the Mexican silver dollar and the terms on which it is received at the Mints, the following information is furnished: Section 3584, Revised Statutes United States, declares that "no foreign gold or silver coins shall be a legal tender in the payment of debts." The Mexican dollar, therefore, has only a value as bullion, which depends upon the price of silver. At the present price of silver bullion it is worth about 90·8 cents in gold per piece. Its circulation as money in the United States is optional, and at whatever value may be agreed upon. The United States trade dollar also is not a legal tender, and, therefore, has only a bullion value. The standard silver dollar being a legal tender for all debts, public and private, is received at par at all Government offices in payment of dues, differing in this respect from the Mexican and trade dollars, which are not received. Mexican dollars, as well as all other foreign silver coins and United States trade dollars, are purchased at the Mint at Philadelphia, and the Assay Office at New York, at the equivalent of the London rate for silver bullion on the day of purchase less one half cent per ounce of fine silver contained. All silver coins so purchased are melted and assayed, and the seller paid for the fine silver contained in standard silver dollars. All parties desiring to sell foreign silver coins or trade dollars to the Government on the above terms will send them, at their own expense, to the Superintendent of the Mint, at Philadelphia, or of the Assay Office at New York; express charges on the silver dollars sent in return also to be paid by the seller. All correspondence relative to silver coins so sent to be addressed to the Superintendent of the Mint or Assay Office to which they are forwarded.

H. R. Linderman, Director of the Mint.

The Disposition of the Standard Coins to Remain in the Vaults.—A dispatch to the New York *Times*, dated Washington, July 31st, says: "Notwithstanding the efforts of the Treasury Department to force standard silver dollars into circulation, those coins continue to accumulate in the vaults of the Treasury. Nearly 1,000,000 standard dollars were recently disbursed at New York for silver bullion, and yet not one dollar was moved from the national vaults. The Government paid silver-coin certificates for the bullion purchased, and these certificates were immediately returned in exchange for 4 per cent bonds, thus leaving the coin in undisturbed possession of the Treasury. By this transaction, the owners of the bullion received a profit on their metallic merchandise, and obtaining their bonds at par for silver dollars, made a second profit to the extent of the premium on the bonds. The responses of national banks to the circular of the Treasurer, asking for silver dollars, thus far aggregate about $1,250,000, and, notwithstanding the subscriptions of the banks, and the disbursements of the department, the books of the Treasury to-day show that the net amount of silver dollars added during the past three weeks to the number outstanding is only $33,000, which shows that the volume of silver flowing into the Treasury is about equal to that which is being forced out."

Silver Coin in Circulation.—The Indianapolis *Journal* publishes the following communication from the Secretary of the Treasury in answer to the question as to the amount of silver coin in circulation:

"Washington, D. C., July 26, 1878.

"Your telegram of the 25th instant, asking what is the estimated amount of silver coin in circulation in the United States, has been received. In reply, I have to inform you that since the passage of the Resumption act, January 25th, 1875, to July 15th, 1878, the Treasury has coined and issued siver as follows:

Coined of fractional silver	$44,063,931
Issued of fractional silver	39,271,734
Coined of standard silver	8,731,848
Issued of standard silver	1,142,796
Making a total coinage of	$52,795,779
And a total issue of	40,414,530
Of the total coinage there remains in the Treasury	$12,381,249

"No estimate can be made of the amount of silver coined before 1875 and now in circulation, but it is evident that there is a large amount, and of that coined since 1875, it is possible that some of it may have gone from the country, though probably not a large amount.

"Very respectfully, John Sherman, Secretary."

Copper.—The sales during the past week have been in a small way at 16@16¼c. During the past two or three weeks there have been sales for export, aggregating nearly 200 tons, one lot being 100 tons. The conditions, however, are not favorable to a profitable export business in the early future. The money rate in London is advancing, which tends to check speculation. Stocks in England are increasing, while the exports and consumption are very small, and exchange is steadily becoming unfavorable. Our own market is in a lamentable condition. Manufacturers appear to have made a mistake in their last large purchases, and are likely to find that they have considerable supplies on hand, when their agreement with the mining companies to sustain prices until September 1st expires. The latest London prices by cable are: Best selected, £69@£70, and Chili bars, £62 10s.@£63.

Tin.—Sales of from 2000 to 2500 slabs of Straits are reported to have been made in this city and Bos

ton, mostly in a large way, at 13⅝@13¾c., and 13¾@13⅞c., according to quantity. The present nominal price is 14c., although 13⅞c. would probably be taken. Malacca is scarce and held at 14⅛c. L. and F. is quoted at 14@14⅛c., and Banca at 17c. The arrivals of tin have been quite large.

Tin Plates.—There is only a jobbing business doing in these. We quote in gold per box as follows: Charcoal tins, $5.75, and ternes, $5.37½; coke tins and ternes, $4.75.

Lead.—This article has taken sudden activity, and has been the feature of the metal market. We are reported sales as follows: 130 tons from dock at 3·35c.: 400 tons for August delivery at 3·35c.; 200 tons September delivery, at 3·35c., and 350 tons, immediate delivery, 3⅝c. It is also reported that at the close there are bids at 3·35@3⅜c. for any quantity, with none offering. The market is in confusion, and it is impossible to state what the price is. This movement is largely speculative, and, if persisted in, the price of lead must advance. At the prices at which lead was lately offering, a speculator could enter without much chance of losing a great amount of money, but at the same time we do not see great prospects of making much in attempting to corner the market.

The San Francisco *Commercial Herald* of July 25th says:

"The Young America, for New York, carried 642,358 lbs. pig-lead; and the Alaska, for the same, via Isthmus, 140,054 lbs.; the City of Peking, for Hong Kong, 41,760 lbs."

Spelter and Zinc.—There is a fair trade doing in Western spelter, which is quoted at 4¾@5c. Sheet zinc is in moderate request and quoted at 5¾c.

Antimony.—Hallett's is quoted at 11⅝@11¾c., and Cookson's at 12½@12¾c.

Quicksilver.—The San Francisco *Commercial Herald* of July 20th says: "The City of Peking has sailed since our last, carrying to Hong Kong 1736 flasks, and to Japan 5 flasks. The demand is good, but the price nominal, say 42@42½c. Since writing the preceding, we note an increased demand for Hong Kong, with free sales for export at 42c., and reported sales of 1500 flasks for the Belgic, to sail the 1st prox. A cable from London, on the 23d inst., quoted the price there at £7 5s., and in Hong Kong at $63 ₰ picul—an advance in both markets—which stimulated business here, and all available lots were purchased, the market closing firm at 42½c.

"The quicksilver exports by sea for the past week are as follows:

	Flasks.	Value.
To Mexico, per Newbern, July 18th	252	$8,056
To China, per City of Peking, July 19th	1,736	59,823
To Japan, per City of Peking, July 19th	5	166
Totals	1,993	68,045
Previously since January 1st	16,099	535,439
Totals since January 1st, 1878	18,092	$603,484
" same period 1877	31,567	1,059,930
Decrease this year	13,465	$455,446

"The receipts for the week amount to 1068 flasks."

Salt Lake Ore and Metal Market.

SALT LAKE CITY, Utah, August 2, 1878.

Argentiferous Lead (Base Bullion), $25 to $27 per ton for lead; $1.15 per ounce for silver; $20 per ounce for gold. The quotations for silver are based upon the silver in the lead of 80 to 120 ounces per ton of 2000 lbs.

Mr. J. B. Meader, under date of July 27th, 1878, reports the following shipments:

Shipments of base bullion for June, 1878	2,787,425 lbs.	
" " " " five months	18,174,791 "	
Total for six months		20,962,216 "
Shipments of lead (Germania refined), in June	390,970	
Shipments of lead (Germania refined), previous	903,754	
		1,294,724 "
Ore shipments for June reduced to lead	25,860	
Ore shipments for five months	760,322	
		786,182 "
Total shipments of lead for six months		23,043,122 "
Same time for 1877		27,117,190 "
Decrease in 1878		4,074,068 "

The *Inter-Ocean's* correspondent, under date of the 22d ult., says:

"The bullion market continues entirely inactive and depressed, with a nominal price of $26 per ton for lead and $1.13 per ounce for silver. The shipments of ore, lead, and bullion for the week ending July 20th, were as follows: Eight cars bullion to Pittsburg; 6 cars bullion to Omaha; 5 cars lead to San Francisco; 5 cars lead ore to Omaha; 8 cars lead ore to Hilliard; bullion, 299,164 pounds; lead, 104,487 pounds; lead ore, 276,388 pounds. This is the smallest week's shipment of bullion that has been made from this point for several years. The Kearsarge mine, that a short time since produced some tellurium ore, is being worked by a good force, and the prospects are that another bonanza is on the way of being discovered.

"It is reported that 10,000 shares of the Ontario Hill Mining Company were sold in New York on Friday, and work is to be commenced at once and driven with energy. This mine adjoins the Ontario mine in Parley's Park."

Ore and Base Bullion Shipments from San Francisco.—The *Commercial Herald* of the 25th ult. reports the following:

"The ship Young America for New York, hence July 20th, carried of iron ore, 475 tons; pig-lead, 642,358 lbs. The City of Peking for Hong Kong carried 41,760 lbs. same. The Alaska for New York via Panama carried off base bullion, 180,000 lbs.; pig-lead, 140,054 lbs.; sulphurets, 59,803 lbs.; antimony, 18,200 lbs.

FINANCIAL.

New York Stocks.

NEW YORK, Friday Evening, Aug. 2, 1878.

There has been an active business in the coal stocks during the past week, but the prices have declined, in sympathy with the general market for railroad shares. There was, however, a firmer market at the close. The sales of Delaware and Hudson Canal amount to 4107 at 52¾@53⅛, closing at 53⅛; of Delaware, Lackawanna, and Western, 89,600 shares, at 59¼@55⅛, closing at 57¼, of New Jersey Central, 11,121 shares, at 38¾@35⅛, closing at 37¼.

COUPONS AND INTEREST on the bonds of the following companies will fall due during the present month:

Consolidation Coal Co.—2d-mortgage bonds (assumed) of Cumberland C. & G. Co. Coupons.
Detroit Water Works.—Coupons.
Indianapolis City Water Works.—Gold, Coupons.
Joliet Iron and Steel Co.—Coupons due.
Louisville Water Co.—Coupons.
Marseilles Land and Water Co.—Coupons.
Morris and Essex R. R. Co.—2d-mortgage and construction bonds of 1869. Coupons paid by Delaware, Lackawanna, and Western R. R Co.
Muskegon Water Works.—Coupons.
Pennsylvania Coal Co.—1st-mortgage, 7 per cent reg. bonds; interest.
Rock Island Water Works.—Coupons.
St. Louis, Iron Mountain and So. R. R. Co.—1st-mortgage bonds; coupons.
Vulcan Iron Works.—Coupons due.

Miscellaneous Stocks and Quotations.

Sales and quotations of the stocks and bonds dealt in here, at Philadelphia and Baltimore for the week ending the 2d inst are given in the following tables. The Philadelphia quotations will have a * affixed. The Baltimore quotations are indicated thus †.

STOCKS.	Par Value.	High'st	Lowest	Closing	Sales: Shares.
American Coal Co.	$25	... ..	.....	28	.....
St.L.,I.M.& S.R.Co..	100	.....	.....	4⅛	.....
Spring Mt. Coal Co.	50	.....	.....	50	.....
*Cambria Iron Co..	50	.....	.....	56	.....
*Penn. Salt Mf'g Co.	50	.....	.....	66	.....
*Westm'land C. Co.	50	.....	.....	60	.....
*Buck Mt. Coal Co..	50	.....	.....	35	.....
*Schuyl. Nav. Co...	50	.....	.....	.....	.....
†B.&O.RR.Co.1st pf	.....	.....	.....	95	.....
†B.&O.RR.Co.2d pf	100	.....	.....	85	.....
" " " " com	90	.....	.....	90	.....
†George's C'k C. Co	100	.....	.....	86½	.....
†S. Clara M'g Co...	100	.....	.....	25c.	.....
†Atlantic Coal Co.	10	.....	.....	91c.	.....

BONDS.	Prine'l. When Due.	Int'est. When Due.	Hig'st.	Lowest	Amount.
D., L. & W., 7s, conv	1892	J. & D.	.....	.....	.....
" " " " 2d mtge.	1881	M. & S.	106¾	106¼	6,000
N.J.C.,1stmtge.new	1890	F. & A.	.....	.....	.....
" " " 1st mtge.,con	1899	Q.	83	.....	3,000
" " " convt.	1902	M. & N.	83	.....	1,000
Lehigh & W. B., con	1899	Q.	65	64⅛	†28,000
Am. Dock & Imp. 7s	.....	J. & J.	.....	.....	.....
St.L.I.M.& S..1st mt	1892	F. & A.	108½	.....	6,000
Ches. & O., 1st mtge	1899	M. & N.	.....	.....	.....
D & H C Co.,1stm.rg	1884	J. & J.	98	.....	1,000
" " " " " "	1891	J. & J.	101	100¾	2,000
" " " " m.loan cp	1894	A. & O.	103	.....	1,000
" " " " " rg.	1894	A. & O.	.....	.....	.....
" " " " new mge.	.....	.....	.....	.....	.....
*L.V.R.,1stm.6s.cp.	1898	J. & D.	.....	.....	.....
" " " " rg.	1898	J. & D.	.....	.....	.....
" " " 2d m. 7s,rg.	1910	M. & S.	116¾	.....	1,000
" " " con.m.6s,rg	1823	J. & D.	100	.....	6,000
" " " " 6s cp.	1923	J. & D.	.....	.....	.....
*Pa.RR.,1st m.6s,cp	1880	J. & J.	104	103¾	3,000
" " g. m., 6s, cp.	1910	J. & J.	107¼	107	20,000
" " " 6s, rg.	1910	A. & O.	109	.....	2,000
" " con.m.6s,rg.	1905	Q.	.....	.....	.....
" " " 6s, cp.	1905	J. & D.	.....	.....	.....
" " new loan, 5s	.....	.....	112	.....	4,600
*P.& R. R., 1st m.6s, R. C. 43-44.	1880	J. & J.	.....	.....	.....
P. & R. R., 1st m. 6s, R. C. 48-49.	1880	J. & J	.....	.....	.....
P.& R. R.,2d m.7s cp	1893	A. & O.	.....	.....	.....
" " " scrip.	1882	J. & J.	63	.....	3,715
" " " in.m.7s,cp	1896	J. & D.	.....	.....	.....
" " " c.m.7s,cp.	1911	J. & D.	105	104½	4,000
" " " " 7s. rg.	1911	J. & D.	105	.....	2,000
" " " cvt.7s,R.C	1893	J. & J.	63	.....	2,000
" " C.& I.Co.,Deb 7s, R. C.	1892	M. & S.	.....	.....	.....
" " & R.C.& I. Co., m. 7s, R. C.	'92-3	various	.....	.....	.....
L. Nav. Co.,6s,rg.m.	1884	J. & Q.	105¾	104½	1,350
" " RR., rg. m.	1897	F. & Q.	104	.....	1,850
" " cvt. co. G. R.	1894	M. & S.	.....	.....	.....
" " " Gold R. C.	1897	J. & D.	91½	90¼	13,500
" " con.m.7s,rg.	1911	J. & D.	.....	.....	.....
*P.& N.Y.C.,7s,R.C.	1896	J. & D.	.....	.....	.....
*Pa Canal, 6s. cp..	1906	J. & J.	.....	.....	.....
*Schuyl.Nav.,1st m. 6s. rg.	1897	M. & Q.	.....	.....	.....
*Sus.Coal, 6s, rg...	1911	J. & J.	.....	.....	.....
†Balt.&O. RR., 6s..	1880	J. & J.	.....	102⅛	.....
" " " " 6s..	1885	A. & O.	.....	105	.....
Total transactions for the week					$113,015

* 11,000 assented, selling at 50@45.

Philadelphia Stocks.

PHILADELPHIA, Friday, August 2, 1878.

The week under review has been a quiet one and fluctuations within small bounds. Lehigh Coal and Navigation Company, with sales of 640 shares, declined from $19⅛ on Monday to $19 on Tuesday, recovering to $19⅛ to-day. Lehigh Valley ranged from $39¾@$40, the sales amounting to 749 shares. Pennsylvania Railroad, with a business of 34,785 shares, was irregular at $31¼@32¾. Philadelphia and Reading ranged from 18¾@18¼, the sales aggregating 17,479 shares.

The New Boston Coal Road.—The *Luzerne Union* says: "A corps of engineers is at work on the Lehigh, from White Haven north, for the proposed railroad from Boston to the West. This new link will strike across the country from Port Jervis, crossing the Lehigh at Rockport, and materially shortening the route for coal to Boston, and for the produce of the great West to the seaboard.

"The Drifton branch of the Lehigh and Susquehanna Railroad has been completed and opened for business from Drifton Junction, Luzerne County, Pa., westward through Buck Mountain, Eckley, and Jeddo to Drifton, a distance of 11 miles."

COUPONS AND INTEREST on the bonds of the following companies will fall due during the present month:

Belvidere and Delaware R. R. Co.—3d-mortgage bonds of 1857, guaranteed by Camden and Amboy R. R.; coupons paid by Pennsylvania R. R. Co.
Delaware and Raritan Canal Co.—Coupons.
Huntingdon and Broad-Top Mountain R. R. Co.—2d-mortgage, gold; coupons scrip; interest.
Lehigh Coal and Navigation Co.—Registered loan of 1897, and Greenwood bonds of 1892; interest.
Lehigh Valley R. R. Co.—Interest on preferred dividend scrip of Morris Canal and Banking Co.
Pennsylvania R. R. Co.—United Co.'s Loan of 1888; N. J. R. R. and Trans. Co. Loan of 1878; Joint Co.'s Loan of 1883; Camden and Burlington Co. R. R. Bonds; Perth Amboy and Woodbridge R. R. Bonds, and Belvidere and Delaware R. R. R.; 3d-mortgage bonds; interest.

Copper Stocks.

Reported by WILSON W. FAY & Co., Brokers in Mining and Miscellaneous Stocks, Room 7, Traveller Building, 31 State street.

BOSTON, Wednesday Evening, July 31, 1878.

The market for the week has been dull and quiet on these stocks, though the other stocks on the list have been as active as could be expected at this season of the year, and the prices of railroad stocks and bonds are, in general, on the rise, while the "coppers" are going in the opposite direction, and are declining slowly but surely every day.

Calumet and Hecla has sold down to 177½, but closes firmer at 178½@179½.

Copper Falls has had the assessment of $1 per share, which we predicted, levied upon it, and, in consequence, is quoted at 1½ bid and 1⅝ asked. Assessment paid.

Franklin has sold down to 6½ and closes weak at 6¼@6¾.

Osceola has sold at $10, and closes rather soft at $9 bid and 9½ asked.

Pewabic has declined to 1½@2.

Quincy has sold down to 14, and closes weak at 14@14½.

Ridge is quiet at 1¼@1½.

Duncan is steady, having sold at 4¾ and closing at 4⅞@5¼.

International closes ⅛ bid and ⅝ asked, and sales at ⅝.

Gas Stocks.

NEW YORK, Friday Evening, Aug. 2, 1878.

The market remains in the same dull condition as for a long time past. We note a change in the quotations of the New York and Jersey City companies.; the former from 93 to 90 bid, and the latter from 155 to 150 bid.

Following is a list of companies paying dividends this month:

Charlestown	(Mass.)	Gas Co	5 per cent.
Dorchester	"	" "	3 "
Jamaica Plain	"	" "	4 "
Lawrence	"	" "	5 "
Malden & Melrose	"	" "	3 "
Newton & Watertown	(Mass.)	Gas Co	4 "
Salem	"	" "	3 "
South Boston	"	" "	3½ "
Mutual (N. Y.) bonds			3½ "

The *Harlem Gas Light Co.* has passed its August dividend.

The Pittsburg (Pa.) Gas Question.—There is trouble in the gas business at Pittsburg. At a recent meeting of the Gas Committee the bill for the lighting certain districts by means of gasoline lamps, amounting to about $1200, was approved, but the Comptroller has refused to certify a warrant therefor on the ground that there is no appropriation to which the amount can be specifically charged. He says the appropriation ordinance gives certain specific amounts to the East End, South Side, and West End gas companies. These companies failed to come to terms with the city, and the Maloney Gasoline Company secured the contract for lighting the lamps in the districts covered by those companies, the terms being about $15.50 per lamp, where the gas companies charged above forty dollars. The only obstacle to the payment of the Gasoline Company is the want of an appropriation for that object. This obstacle, the Comptroller says, will be removed if Councils will transfer the money now in the appropriations for the several gas companies named to the Contingent Fund for the payment of the bills of the Gasoline Company. This economical measure will probably be adopted at the next regular meeting in September.

The San Francisco Gas Question.—The recent marked decline in the stock of the San Francisco Gas Co., amounting to nearly 20 per cent, was caused by the introduction of a resolution in the Board of Supervisors requiring the gas company to reduce its rates from $3.50 to $2.50 per 1000 feet.

Williamsport (Pa.) Gas Works.—We note the statement that the daily capacity of these works have been increased 100,000 feet.

The Citizens' Gas Co., of St. Joseph, Mo.—The Toledo *Blade* says: "The failure of the Citizens' Gas Light Company, of St. Joseph, Mo., has struck several people in Ann Arbor, Mich., a severe blow. The company, which was organized on Ann Arbor capital, showed such a towering hoggishness that the consumers quit taking gas, formed a new company and froze the old one out. Ann Arbor capitalists lose from $1000 to $30,000 each."

Atlanta, Ga., is considering the advisability of illuminating her streets with the electric light.

The South Framingham (Mass.) Gas Question.—President William H. Gibbs, of the National Petroleum Gas Company, of Boston, has just paid a visit to this village, and

COAL TRANSPORTATION AND GENERAL MINING STOCKS.

COAL STOCKS.

Name and Location of Company.		Feet on Vein.	Capital Stock.	Shares. No.	Shares. Par Val.	Assessments. Total levi'd to date.	Assessments. Date and amount per share of last. Mo.	Yr.	Amt.	Dividends. Total paid to date.	Last Dividend. Mo.	Yr.	Amt.	Rate per Ann.	Highest and Lowest Prices Per Share in Currency at Which Sales Were Made. N. B.—Quotations of D., L. & W. R. R., and Pa. Coal Co. are per $100—two shares. June 27. H.	June 27. L.	July 29. H.	July 29. L.	July 30. H.	July 30. L.	July 31. H.	July 31. L.	Aug. 1. H.	Aug. 1. L.	Aug. 2. H.	Aug. 2. L.	Sales.
			$		$100	$				$				Per c'nt													
Consol. Coal	Md.		10,250,000	102,500	$100	*					Jan.	1877	2½														
Del. & H. Canal	Pa.		20,000,000	200,000	100	*				38,821,104	Aug.	1876	4	9	56¾	55	56½	55½	55	53½	54½	53¾	54½	54	54½	53½	4,107
Del., Lac. & W. R. R.	Pa.		26,200,000	524,000	$50	*					July	1876	2½	5	59	57	59¼	57⅛	57¼	56¾	58⅜	56⅝	58½	56⅝	57¼	55½	89,600
Lehigh C. & Nav.	Pa.		10,448,550	208,971	50	*					Nov.	1876	1½	5½	19⅛	19⅛	19¼	19¼	19	19			19¼	19¼	19½	19¼	640
Lehigh Valley R. R.	Pa.		27,228,855	540,858	50	*					July	1878	1				40	40	40	39¾	39⅞	39⅞	40	40	39⅞	39¾	749
Maryland Coal	Md.		4,400,000	44,000	100	*					Jan.	1876	1½	1½													
N. J. Central R. R.	Pa.		20,600,000	206,000	100	*					Apr.	1876	2½	2½	38	35¾	38¾	36¼	37	35½	38¼	37⅜	38⅝	36⅞	37⅜	36¼	11,121
Pennsylvania Coal	Pa.		5,000,000	100,000	50	*					May	1878	3														
Pennsylvania R. R.	Pa.		68,870,200	1,337,404	50	*					May	1877	1½	8	32⅝	31⅛	32⅛	32	32⅛	31¾	32⅝	32¼	32¾	32¼	32⅜	32⅛	34,785
Phil. & Read. R. R.	Pa.		34,278,175	685,563	50	*				43,012,497	Jan.	1876	2¼†	10	18¾	18¼	18¾	18¼	18⅝	18¼	18⅝	18⅛	18⅝	18⅛	18⅝	18½	17,479

GENERAL MINING STOCKS.

Dividend Paying Mines.

American	Col.		1,000,000	100,000	10	*				60,000	July	1878	$0 10	12	7½										7	6	500
Belcher, g. s.	Nev.	1,040	10,400,000	104,000	100	1,184,200	May	1878	1 00	15,397,200	Apr.	1876	1 00	12													
Bobtail, g.	Col.	2,500	1,136,630	227,326	5	*				56,831	Nov.	1877		25													
Bobtail Tunnel, g.	Col.		100,000	20,000	5	52,000	July	1873	0 30	40,000	Dec.	1877		50	20												
California, g. s.	Nev.	600	54,000,000	540,000	100					28,620,000	July	1878	1 00	24	7				10		10		10				630
Calumet & Hecla, c.	Mch		2,000,000	80,000	25	1,000,000				12,650,000	Feb.	1878	5 00	20			178		178¼		178½		179				49
Central, c.	Mch		500,000	20,000	25	100,000	June	1862	0 65	1,260,000	Feb.	1878	5 00														
Chollar Potosi, g. s.	Nev.	1,400	2,800,000	28,000	100	1,610,000	Jan.	1878	3 00	3,080,000	Feb.	1872	1 00														
Copper Falls, c.	Mch		1,000,000	20,000	50	535,000	May.	1876		100,000	Nov.	1871	1 00				1⅝										200
Cons. Virginia, g. s.	Nev.	710	54,000,000	540,000	100	474,600	June	1873	3 00	40,500,000	June	1878	1 00	12									9		9		110
Confidence, g. s.	Nev.	130	2,496,000	24,960	100	256,320	Apr.	1878	0 50	78,000	May.	1865	8½	8½													
Cons. Her. & Roe	Col.	16,500	1,000,000	100,000	10	*				120,000																	
Crown Point, g. s.	Nev.	600	10,000,000	100,000	100	1,773,370	June	1878	1 00	11,588,000	Jan.	1875	2 00	24													
Eureka Cons., g. s. l.	Nev.		5,000,000	50,000	100	100,000	May	1876	1 00	2,350,000	May	1878	3 00	24													
Eureka G. Mg., g.	Cal.	1,080	2,000,000	20,000	100					2,149,000	Apr.	1878	0 25														
Franklin, c.	Mch		500,000	20,000	25	360,000	June	1876	5 00	585,000	Nov.	1871	1 00		6¼												65
Gould & Curry, g. s.	Nev.	612	10,800,000	108,000	100	2,666,000	Apr.	1878	1 00	3,826,800	Oct.	1870	10 00														
Grand Prize	Nev.	1,500		100,000		100,000	July.	1878	1 00	400,000	Feb.	1878	1 00														
Hale & Norcross, g. s.	Nev.	400	11,200,000	112,000	100	2,802,000	May	1878	0 50	1,598,000	Apr.	1871	5 00	12													
Hukill, g. s.	Col.	3,288	1,000,000	100,000	10	*				180,000	July	1878	0 10	12							4.80	4.65					150
Kentuck, g. s.	Nev.	95	3,000,000	30,000	100	270,000	Dec.	1874	1 00	1,252,000	Mar.	1870	5 00														
Leopard, L. g. s.	Nev.	1,500	5,000,000	50,000	100	125,000	Apr.	1878	30	162,500	Dec.	1876	0 50														
Merrimac, s.	Mas.	1,500	500,000	100,000	5	*				120,000	Mar.	1878	0 10	12													
Minnesota, c.	Mch		1,000,000	20,000	50	436,000	June	1869	1 00	1,820,000	Mar.	1876	0 50														
Moose	Col.	39,000	2,000,000	200,000	10	*				200,000	Mar.	1878	0 25	10			3.15		3.05								200
National, c.	Mch.		500,000	20,000	25	195,000	Oct.	1875	1 00	360,000	Oct.	1873	1 00														
N. Y. & Colorado, g.	Col.		1,000,000	50,000	20	*				20,000	Mar.	1877	0 20								2				1.95		300
Northern Belle, s.	Nev.	1,600	5,000,000	50,000	100					1,425,000	Feb.	1878	1 00														
Ontario	Uth.	3,000	10,000,000	100,000	100					1,450,000	July	1878	1 00	6	38¾		38¾		38⅛		38¾	38¼	38⅛		38¼		1,300
Ophir, g. s.	Nev.	675	10,080,000	100,800	100	3,236,000	June	1878	1 00	1,394,400	Mar.	1864	4 00														
Pewabic, c.	Mch.		500,000	20,000	25	185,000	June	1868	3 00	460,000	July	1873	1 00														
Phoenix, c.	Mch.		1,000,000	20,000	50	817,500	Sept.	1870	3 00	20,000	Jan.	1876	1 00								4				3.95		150
Plumas	Cal.		1,000,000	100,000	10					40,000	July	1878		10													
Polar Star, g. s.	Col.	1,300	500,000	50,000	10	*				5,000	Jan.	1878	0 10														
Quincy, c.	Mch.		200,000	20,000	10					2,130,000	Feb.	1877	4 00				14										60
Raymond & Ely, g. s.	Nev.	5,000	3,000,000	30,000	100	570,000	Apr.	1878	1 00	3,075,000	Sept.	1873	3 00														
Ridge, c.	Mch.		500,000	20,000	25	200,000				90,000	Feb.	1875	1 00														
Rye Patch	Nev.	1,600		30,000		97,500	Nov.	1876	0 50	105,000	Dec.	1877	0 25														
St. Joseph, L.	Mo.	2,000 acs.	1,000,000	200,000	10					250,000																	
Savage, g. s.	Nev.	800	11,200,000	112,000	100	3,880,500		1878	1 00	4,460,000	June	1869	3 00														
Seaton, g. s.	Col.	1,700	500,000	50,000	10	*	June			10,000	May	1877	0 10	12							1.15						100
Sierra Nevada, g. s.	Nev.	3,650	10,000,000	100,000	100	1,950,000	May	1878	0 50	102,000	Jan.	1871	1 00	10													
Silver King										200,000	Feb.	1878	0 50														
Standard	Cal.			50,000		50,000	July	1878	1 00	450,000	May	1878	1 00														
Yellow Jacket, g. s.	Nev.	1,200	12,000,000	120000	100	3,678,000	Apr.	1878	2 00	2,184,000	Aug.	1871	2 50														

Non-Dividend Mines.

Allouez, c.	Mch.		1,000,000	20,000	50	940,000	May	1876	5 00																		
Alpha, g. s.	Nev.	300	3,000,000	3,000	100	240,000	Mar.	1878	1 00																		
Am. Flag, g.	Col.	5,300	600,000	60,000	10	*																					
Bertha & Edith, g.	Vir.	645 acs.	3,500,000	350,000	10	*									6c		6c	5c			6c	4c	5c		18c		500
Best & Belcher, g. s.	Nev.	545	10,080,000	100,800	100	438,590	Apr.	1878	1 00																		17,600
Buckeye	Col.		2,000,000	400,000	5	*											32c	31c			33c				33c		7,300
Bullion, g. s.	Nev.	943⅛	10,000,000	100,000	100	2,802,000	Jan.	1878	1 00																		
Caledonia, g. s.	Nev.	2,188	10,000,000	100,000	100	1,440,000	May.	1878	0 50																		
Cashier	Col.		500,000	250,000	2	*																					
Cleveland, g.	Col.	3,715	250,000	25,000	10	*																					
Cons. Imperial, g. s.	Nev.	468	50,000,000	500,000	100	675,000	Apr.	1878	0 20																		
Con. N. Slope & E. C.T.	Col.	15,000	500,000	10,000	50	*																					
Dahlonega	Ga.		250,000	250,000	1	*																					
Dana, c.	Mch.		500,000	20,000	25	68,000	Jan.	1863	0 50								16c	15c	17c	15c	18c	16c	16c	15c	15c		8,800
Dawson, s.	Ont.		1,200,000	60,000	20																						
Duncan, s.	Ont.		1,200,000	60,000	20	75,000	July	1876	41⅔																		
Exchequer, g. s.	Nev.	400	10,000,000	100,000	100	380,000	Jan.	1878	1 00								5½	4½									610
Gold Placer, g.	Col.		5,000,000	200,000	25																						
Granville, g.	N. C.	357 acs.	1,000,000	100,000	10	*			0 50						34c	33c	33c	30c	30c		34c	30c	33c	29c	30c	28c	5,500
Humboldt, c.	Mch.		500,000	20,000	25	100,000	Sept	1876	0 15																		
International, s.	Ont.		1,200,000	60,000	20																						
Julia, g. s.	Nev.	3,000	11,000,000	110,000	100	535,000	Jan.	1878	0 75								62½										100
Justice, g. s.	Nev.	2,100	10,500,000	105,000	100	2,500,500	June	1878	1 00																		
King's Mountain, g.	N. C.		1,200,000	120,000	10	*																					
Lacrosse	Col.	3,900	1,000,000	100,000	10	*																					
Luzerne	Col.	4,200	5,000,000	500,000	10	*									30c	27c	30c	29c	32c	28c	31c	30c	29c	26c	28c	26c	32,900
Madison, c.	Mch.		500,000	20,000	25	123,000	Sept	1876	0 10																		
Mariposa preferred	Cal.	44,387	5,000,000	50,000	100	1,425,000	June	1877	1 00																		
" common	Cal.	acres.	10,000,000	100,000	100	1,425,000	June	1877	1 00																1¾		200
Memphis	Col.	6,000	300,000	60,000	5	*																					
Mesnard, c.	Mch.		500,000	20,000	25	160,000	Apr.	1876	0 50																		
Mexican, g. s.	Nev.	600	10,080,000	100,800	100	217,400	May.	1878	0 50																		
Mt. Bross Tunnel	Col.	8,600	2,000,000	200,000	10	*																					
Overman, g. s.	Nev.	1,200	3,840,000	38,400	100	3,173,880	Apr.	1878	3 00																		
Osceola, c.	Mch.		1,000,000	40,000	25	2,567,880	Nov.	1877	3 00																		
Petherick, c.	Mch.		500,000	20,000	100	165,533	Mar.	1876	0 50																		
Pleasant View, g.	Col.	1,200	200,000	20,000	10	*																					
Quicksilver preferred	Cal.	8,500	4,291,300			*																					
" common	Cal.	acres.	5,708,700	100,000	100										33¾	33					32				30		550
Rockland, c.	Mch		500,000	20,000	25	495,000	Jan.	1874	1 00						13						13						200
Seg. Belcher, g. s.	Nev.	160	640,000	6,400	100	244,800	Apr.	1876	5 00																		
Silver City, g. s.	Nev.	3,900	6,310,000	63,100	100	15,775	Nov.	1876	0 25																		
Silver Hill, g. s.	Nev.	5,400	10,800,000	108,000	100	1,188,000	Apr.	1878	1 00																		
Star, c.	Mch.		500,000	20,000	25	265,000	Mar.	1876	0 50																		
Superior, c.	Mch.		500,000	20,000	25	340,000	Mar.	1874	0 25																		
Union Cons. g. s.	Nev.	850	10,000,000	100,000	100	310,000	Apr.	1878	0 25																		

g. Gold. s. Silver. l. Lead. c. Copper. * Non-Assessable. † A dividend of 3½ per cent. was declared on the preferred stock of this Co. in July, 1876.

Total Assessment levied to date..... 51,072,348
Total Mining Dividends to date..... 228,207,332

Total Sales of Coal Stocks for the week..... 158,481 shares.
Total Sales of Mining Shares for the week..... 79,083 "

examined the proposed site for laying the gas pipes. He will be here again the present week for the purpose of furnishing estimates and giving other facts relative to the cost of introducing gas into the town. It is stated that the probable cost of gas here will be $1.50 per 1000 cubic feet.

Dorchester (Mass.) Gas Co.—35 shares of this company's stock, ex-div., sold at auction on the 24th ult. at $96⅞ per share.

The following list of Companies in New York and vicinity is corrected weekly by GEORGE H. PRENTISS, Broker and Dealer in Gas Stocks, No. 30 Broad street, New York:

COMPANIES IN NEW YORK AND VICINITY.	Capital Stock.	Par.	DIVIDENDS. Rate per ann.	Am. of last.	Date of last.	QUOTATI'NS Bid.	As'd.
	$		P. ct.				
Mutual, N. Y....	5,000,000	$100	6	1½	July, '78	72	*76
" Bonds...	90,000	1,000	6	3½	Aug., '78	.....	102
N. York "	4,000,000	.....	8	4	May, '78	90	95
Metrop. "	2,500,000	100	10	5	Feb., '78	129	135
" Certfs...	1,000,000	.....	7	3½	" '78	100	103
Harlem "	1,850,000	50	6	3	Feb., '78	75	82
Manhat. "	4,000,000	50	....‡	5	May '78	180	190
Brooklyn, Bkln.	2,000,000	50	15	5	Apr., '78	143	155
Nassau	1,000,000	25	....‡	3	July, '78	73	77
" Certfs...	700,000	1,000	7	3½	May, '78	90	97
People's.....	1,000,000	10	....‡	3½	Jan., '76	20	30
" Certfs.	300,000	1,000	7	3½	July, '78	75	85
" Bonds....	325,000	.....	7	3½	May, '78	90	96
Metrop. "	1,000,000	100	5	2½	May, '78	60	67
W'msb'g "	1,000,000	50	8	1½	July, '78	75	80
" Certfs...	1,000,000	.....	7	3½	July, '78	95	100
Citizens'.....	1,200,000	20	....‡	3	July, '78	73	80
" Certfs...	320,000	1,000	7	3½	Apr '78	97	100
J. C., N. J.....	750,000	20	10	7½	July, '78	150	160
Municipal, N. Y.	466,000	50	.....	.....	.....	95	100
" Bonds..	750,000	.....	.....	.....	.....	.....	...
.....	.....	.....	.....	.....	.....	.....	...

* Ex Dividend.

Gold and Silver Stocks.

NEW YORK, Friday Evening, Aug. 2, 1878.

The week under review has been very quiet in mining stocks, without any particular feature in any mine or the list. The Hukill Company has declared its seventeenth monthly dividend of one per cent, payable on the 10th inst. The Plumas has declared a dividend of 8c. per share, payable on the 15th inst. There appears to be some uncertainty as to the American Company declaring one this month, no announcement having been made as yet. The dealings in this stock aggregate for the week 500 shares, at $7⅛@$6. California records 630 shares at $7@$10 and Consolidated Virginia, 110 shares at $9. In Hukill there have been but 150 shares sold at $4.80@$4.65. Moose records 200 shares, at $3.15@$3.05; New York and Colorado, 300, at $2@$1.95; Plumas, 150, at $4@$3.95; Seaton, 100, at $1.15. Even the light weights have been quiet, with a declining tendency. In La Crosse the dealings amount to 32,900 shares, at 32@26c.; in American Flag, 500 shares, at 18c.; In Bertha & Edith, 17,600 shares, at 6@4c.; in Dahlonega, 8800 shares, at 17@15c.; in Gold Placer, 5500 shares. at 34@28c.; Buckeye records 7300 shares, at 31@33c., mostly, if not entirely, "washes," however. It is said that a report upon this property will soon be furnished by two experts.

The Penobscot and Snowdrift mines. of Montana, have been capitalized at $500,000, divided into 100,000 shares of $5 each, instead of 5000 shares of $100 each as previously reported by us. We are informed that the larger part of the stock has been subscribed for. The company is organized under the laws of Montana. The stock is non-assessable, and the stockholders are free from all personal liability. It is the policy of the company, however, to set aside $5000 per month from the net earnings until there is accumulated a fund sufficient to provide against loss by fire, accidents to machinery, faults in mines, etc.

We have been permitted to examine the report on these mines made by Mr. Walter McDermott, a gentleman of experience and well spoken of by those with whom we have come in contact who knew him. His report bears date of May 25th. At that time there had been taken from the mine from the beginning of the year $80,797.62, the total cost of mining, milling, and transporting being about $6500. The total number of tons milled was 685, there remaining on dump 150 tons of good ore. The ore worked was treated by very crude means, and considerable gold was lost. According to the latest advices, there had been taken out over $115,000. There has not yet been any stoping done, the ore taken out being that secured in sinking a shaft 96 feet in depth, and driving 54 feet of drift and 16 feet of cross-cuts. The drifts are only 4 to 5 feet wide and not the full size of the vein. The range of 33 assays of ore was 0·30 ounce gold to 65·61 ounces per ton, the average value of the ore being about $100 per ton. According to the report of Mr. McDermott a "horse," part granite and part slate, had been struck in the shaft. A telegram, dated Belmont, July 22d, says: "Shaft 96 feet in depth. Rich ore under 'horse.'" One of July 29th, says: "Air shaft (started), 40 feet from Penobscot Shaft (down) 6 feet. Excellent ore. Streaks along hanging (wall) full of gold only 6 feet from surface."

The public has had its attention drawn to the Penobscot mine through the press, which noted its production of a bar of gold valued at $54,235.62. Although the correspondence that made the announcement was somewhat sensational, yet the reports of Mr. McDermott and of the local press indicate that the owners of the mines are likely to reap great wealth from them. It is their belief that when the 15 stamps now on the property are erected, the mines will be able to earn $50,000 per month.

The title to the property is secured by a United States patent. The company will reserve in its treasury $50,000 of the capital stock for a working capital. The cost of 15 stamps will not be over $18,000.

All the evidence points to this mine's being a genuine one, and, furthermore, its capitalization, based upon its past history and present prospects, is in accord with our views of values. If the stock should be put on the list of the Mining Exchange and the expectations of its owners should be realized, it would soon be worth millions of dollars or some of the other stocks would have to do without business or seek a basis so low as to seem like wiping them out entirely. There can be no question that many of the stocks would cease to attract attention were there a few mines placed upon the list equal to what the Penobscot promises to be. With such mines the public would begin to take an interest in mining stocks, and the brokers who made a little money in putting upon the public a few mining swindles would learn that it were better had they given their attention to legitimate enterprises.

Mr. John F. Randolph, M.E., is now on his way from Denver to examine the mine in the interest of the Security Committee of the Mining Exchange. His report will probably reach here in about three weeks.

At last we see the application of latest improved mining machinery to the development of the wonderfully rich silver deposits of the Cerro de Pasco mines of Peru. An 80-stamp mill, with every known improvement, has recently been shipped to these mines from San Francisco. The total weight of the shipment aggregated 530 tons, no single piece weighing over 300 lbs. The capacity of the mill when completed, will be from 350 to 450 tons per day. When it is taken into consideration that the ore will average over $100 per ton, it may be readily understood that this will have a very important bearing on the silver supply in the near future. The Peruvian Government Records prove that from 1630 to 1821 $493,000,000 were taken from these mines with the most crude appliances; and further, that the mines were invariably abandoned when reaching water-line. Recent extensive borings with the diamond drill demonstrate that the deposits of ore are almost unlimited, and that below water-level the ore becomes much richer. The superintendent of this mill states that in these mines alone there is sufficient ore to keep 20 mills, of the capacity of the one noted here constantly supplied.

A dispatch from Panama, dated July 23d, says:

"The steamer Perusia, engaged in bringing free Chinamen to Peru, in virtue of the treaty between the two countries, is now nearly due. She is supposed to have nearly a thousand immigrants on board, and if she had ten times that number, it would be an easy matter to find them lucrative employment under sound guaranties of good treatment. The agency here is overwhelmed with applications for labor from the great estates along the coast. At last accounts work was steadily in progress on the Socabon tunnel at the Cerro de Pasco. The tunnel had been driven into the mountain side to a depth of eighty-five meters, and as the work advances the organization is being rapidly perfected."

We call attention to the advertisement of "Bonner" in our advertising columns, soliciting a small amount of capital for a Southern gold-mining property. From our investigation of this enterprise we are led to believe that it is well worthy of attention.

The *Commercial Herald* of the 25th ult., has the following:

"The advance in Ophir gave a strong impetus to the entire list, the aggregate sales for the week reaching nearly $2,400,000 in the regular sessions of the San Francisco Board. The news seems more than usually encouraging of finding ore in various old localities on the great Comstock Lode, and we certainly hope that no disappointment may follow, for with even a limited find a revival of business will be brought about that will astonish the entire mining stock community. This is the hope everywhere, and it looks as though it might be at least partially realized. California and Con. Virginia are lower than they ever have been since the unearthing of the 'bonanza' that has been so long the wonder of the world. The lower levels in the Con. Virginia are in hard-blasting porphyry and low-grade ore, and we can not give a much better report from the California. Large sales of Sierra Nevada, Mexican and Union Con. were made—in fact, the market was crowded, and the result was a decline. We shall await developments of ore with some anxiety. Savage shows by its balance sheet for the fiscal year that $672,000 in assessments were levied."

SAN FRANCISCO MINING STOCK QUOTATIONS.
Daily Range of Prices for the Week.

NAME OF COMPANY	CLOSING QUOTATIONS July 26.	July 27.	July 29.	July 30.	July 31.	Aug. 1.	Opening Aug. 2.
Alpha.....	10	9½	10⅝	10¾	10¼	11	11
Belcher....	4¼	4	4⅛	4¼	4¼	4⅝	4½
Best & Bel.	14⅝	13⅞	14¾	14¾	14⅝	14⅞	15
Bullion.....	4¾	4⅝	4¾	4⅞	5⅛	5⅛	.....
Caledonia..	2	2	2	1⅞	2	2⅛	.....
California..	9	8¾	10	9⅝	9¼	9¾	9⅝
Chollar-Pot	29	28	29	28½	30	29	30
Con. Imp...	.....	.....	.....	.....	.....	.....	.....
Con. Va.....	7¾	8	8¼	8¾	8⅝	8½	8½
Confidence.	5¾	5¼	.....	.....	.....	5¼	.....
Crown P'int	7	6¾	6⅞	7⅛	7¼	8½	8
Eureka Con	45	45½	46	46	49	47¼	48
Exchequer.	3⅜	3¼	3⅜	3¾	3⅞	4	.....
Gould &Cur	7	6⅞	6¾	6¾	6⅞	7⅜	7½
Grand Prize	3½	3½	3½	3½	3½	3½	.....
Hale & Nor.	7¼	7⅛	7⅛	7	6¾	7⅛	7
Julia.....	7⅛	7¼	7⅛	7¾	7⅜	8⅝	.....
Justice.....	4⅞	4⅝	4¾	4⅞	5¼	5¼	5
Kentuck	3½	3½	3½	3¾	.....	.....	.....
Mexican....	13⅝	12½	13⅜	12½	13⅜	13⅛	13¼
North. Belle	10¾	10⅞	10¾	11	10½	10½	.....
Ophir	42	38½	.....	36¾	41¾	41¼	46½
Overman...	10½	9⅞	10	10⅛	10⅝	11½	12
Ray. & Ely.	3	3	3	3	3	...	3
Silver Hill..	¾	¾	11-16	11-16	.....	.....	.....
Savage.....	10¼	9⅞	9½	10¼	10⅛	10	10½
Seg.Belcher	.....	.....	.....	.....	.....	.....	.....
Sierra Nev.	8⅛	7¾	8½	9¼	11	11¾	12⅝
Union Con.	7½	7	7½	7¼	8⅝	9⅛	9¾
Yel. Jacket.	10	9½	9¼	9¾	10	10¼	10½

The above list opened in San Francisco to-day with scarcely a single exception, at nearly the highest point of the week. The prominent feature is Sierra Nevada, which opened to-day at $12⅝ against $7 per share a week ago. The gradual appreciation of the shares of this company throughout the operations of the week would seem to indicate that considerable credence was placed in the reported discovery of a bonanza on the 2100-foot level, and probably extending into the ground of the Union Consolidated Mining Company, as this stock also exhibits a gradual advance. Ophir shows a decided improvement, but Mexican is a little off. We are advised by one of our correspondents on the Pacific Coast, that a general impression prevails that a "big deal" is on foot, involving Ophir and Mexican etc., with a corresponding decline to follow. The bonanzas are a little better, the present output of the two companies scarcely reaches 500 tons per day. The loaning limit on the stock of the California Mining Co. has been reduced to $5 per share, so that the shares of these companies stand equally as a basis for collateral.

The bullion yield of these mines for the year beginning July 1st, 1877, and ending June 30th, 1878, as shown by a report furnished the United States Surveyor General, was 187,572 tons of ore, which produced bullion to the value of $15,468,915.50. The yield of the California mine for the same time was 222,276 tons of ore, which produced bullion to the value of $17,649,329.42, making a total yield of 409,848 tons of ore, the bullion product of which was $33,118,244.92.

Eureka Consolidated Stock is steady. This company is now mining and reducing about 200 tons of ore per day. Grand Prize does not exhibit a single variation in the quotations through the dealings of the week. We are advised that it is extremely improbable that this company will resume dividends before very late in the year, if at all this year.

The stock of the Northern Belle Mining Company is steady. Recent advices from this mine report the finding of better ore.

New Rocky Bar Mining Co.—The capital stock of this company is to be increased from $66,000 to $2,200,000.

ASSESSMENTS, with dates when delinquent: Alta, $1, August 22d; Scorpion, $1, August 2d; Wells Fargo, 10c., August 23d; Prospect, 25c., August 20th; Silver Hill, 50c., August 22d; Belcher, $1, August 20th; Modoc Cons., 50c., August 26th; Real Del Monte, $1, August 26th; Panther, 10c., Martin White, $1, Planet Gravel, 2c., August 16th; McCracken Cons., 50c., August 24th.

OFFICE OF HUKILL GOLD AND SILVER MINING CO.

NEW YORK, August 1, 1878.

The regular monthly dividend (the 17th) of one per cent will be paid at the office of the company, as above, on and after the 10th inst. Transfer books will close on Saturday, the 3d, and re-open on Tuesday, 13th inst.

S. V. WHITE, Treasurer.

OFFICE OF THE PLUMAS NATIONAL QUARTZ MINING CO.

77 CEDAR STREET,
NEW YORK, August 1, 1878.

The dividend for the month of July, of eight cents per share upon the capital stock of the Plumas National Quartz Mining Co., has this day been declared, payable in gold coin, on and after the 15th inst., at the office of the Transfer Secretary, No. 77 Cedar street, Room 15. Tranfer books will close on the 8th, and re-open on the 17th inst.

By order of the Board.

A. P. MARSHALL,
Transfer Secretary.

GRANVILLE GOLD COMPANY.

Incorporated November 10th, 1876.

Capital, $1,000,000. 100,000 Shares, par value $10.

For the purpose of erecting additional machinery, a limited number of shares are now offered for sale. Send for prospectus to the Company's Office, 23 Dey street, New York, Room 1, where subscription books are now open.

EDWIN H. MULFORD, Sec.

NEW YORK & PHILADELPHIA.

NEW LINE.

BOUND BROOK ROUTE

FOR TRENTON AND PHILADELPHIA.

Ferry Station in New York, Foot of Liberty Street, North River, commencing July 17, 1878. Trains leave New York for Trenton and Philadelphia at 6:30, 8:00, 9:30, 10:15, 11:30 A. M., 1:30, 4:00, 5:30, 12:00, P. M., and at 4:30 P. M. for Trenton.

Leave Philadelphia from station North Pennsylvania Railroad, Third and Berks Streets, at 6:45 (way), 7:45, 9:30, 11:30 A. M., 1:30, 2:30, 4:15, 5:45, 12:00 P. M.

Leave Trenton for New York at 1:20 (daily, except Monday), 6:40, 8:13, 10:20 A. M., 12:15, 2:15, 3:00, 4:55, 6:30 P. M.

Sunday Trains leave New York and Philadelphia, at 9:00 A. M., 5:30, 12:00 P. M. Leave Trenton for New York at 1:20, 9:50 A. M., 6:10 P. M.

Pullman Drawing Room Cars are attached to the 9:30 A. M., 5:30 P. M., trains from New York to the 7:45 A. M., 1:30 P. M. trains from Philadelphia.

Tickets for sale at foot of Liberty Street, Nos. 529 and 944 Broadway, at the principal hotels, all offices of the Erie Railway in New York and Brooklyn, and at No. 4 Court Street, Brooklyn. Baggage checked from residence to destination.

Boats of the Brooklyn and Erie Annex make connection at Jersey City station to and from Brooklyn and Erie Depot, Jersey City. H. P. BALDWIN, Gen. Pass. Agent.

COLORADO CENTRAL RAILROAD.

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$500.00 REWARD.

The public are informed that on the 16th day of last month a gentleman, accompanied by a lady, entered the ticket office of the MISSOURI, KANSAS and TEXAS RAILWAY at HANNIBAL, MO., and purchased of the Ticket Agent two first-class tickets, reading from Hannibal, Mo., to DALLAS, TEX. They also inquired if there was a sleeping car running direct through. The Ticket Agent informed them that there was, and that it would leave in a few moments. They then asked if the Sleeping Car passed through DENISON and SHERMAN, TEX. The Ticket Agent answered that it did, and was just about to hand the party a map and time table of the famous INDIAN TERRITORY ROUTE TO TEXAS, when the lady broke out, "See here, Mister Ticket Agent, I have heard and I have read a great deal about this MISSOURI, KANSAS, AND TEXAS RAILWAY and the B. I. T., and I want you to tell me the truth before we take that train. Is it true that there is only one railroad in the United States that passes through the B. I. T., and is it true that the name of that road is the M., K. and T., and is it true that everybody takes it, and that it ENTERS TEXAS AT DENISON?" "Madam," says the Ticket Agent, "I am proud to say it is all true, the M., K., and T. R'y is the only line that ENTERS TEXAS AT DENISON, and the only line running SLEEPING CARS to SHERMAN and DALLAS, TEX, and"—just then the bell rang; the parties made haste to the train, which was in a moment whirling on its way to TEXAS and the far-famed Indian Territory, while the HANNIBAL Ticket Agent walked the floor of the M., K., and T. TICKET OFFICE racking his brain, trying to make out what "she" meant by "B. I. T." He never stopped to think that every day in the week he was asked from 200 to 300 times, "Give me a ticket to DALLAS, or FORT WORTH, or DENISON, or SHERMAN, or HOUSTON, through the BEAUTIFUL INDIAN TERRITORY," which last three words the lady abbreviated. Reader, if you are going to TEXAS, try the route through the Beautiful Indian Territory. It is the PANORAMIC ROUTE TO TEXAS.

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